THIS WEEK'S NATIONAL PETROLEUM NEWS

The Recognized Authority on News, Markets and Technical Developments in the Oil Industry

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COMING MEETINGS

Society of Automotive Engineers, White Sulphur Springs, W. Va., May 31 to June 5.

Oil Field, Gas Well and Refinery Workers Union, International Convention, Hotel Tulsa, Tulsa, Okla., June 1 to 4.

American Petroleum Institute, Division of Production, Eastern District, William Penn Hotel, Pittsburgh, Pa., June 4 and 5.

Dixie Interstate Board, Adolphus Hotel, Dallas, Texas, June 15.

Pennsylvania Grade Crude Oil Assn., 13th annual meeting, State College, Pa., June 18, 19.

American Society for Testing Materials, annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 29 to July 3.

American Petroleum Institute, Division of Production, Mid-Continent District, either Tulsa or Oklahoma City, sometime in Sept.

American Chemical Society, semi-annual meeting, Pittsburgh, Pa., Sept. 7 to 12.

World Power (Fuel) Conference, Washington, D. C., Sept. 7 to 12.

Kentucky Petroleum Marketers Assoc., Brown Hotel, Louisville, Ky., Sept. 9 and 10.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 16, 17, 18.

American Institute of Mining and Metallurgical Engineers, Cleveland, Ohio, sometime in October.

Indiana Independent Petroleum Association, fall convention, Hotel Severin, Indianapolis, Ind., Oct. 21 and 22.

National Oil Marketers Association, annual convention, Stevens Hotel, Chicago, Ill., Oct. 27 to 29.

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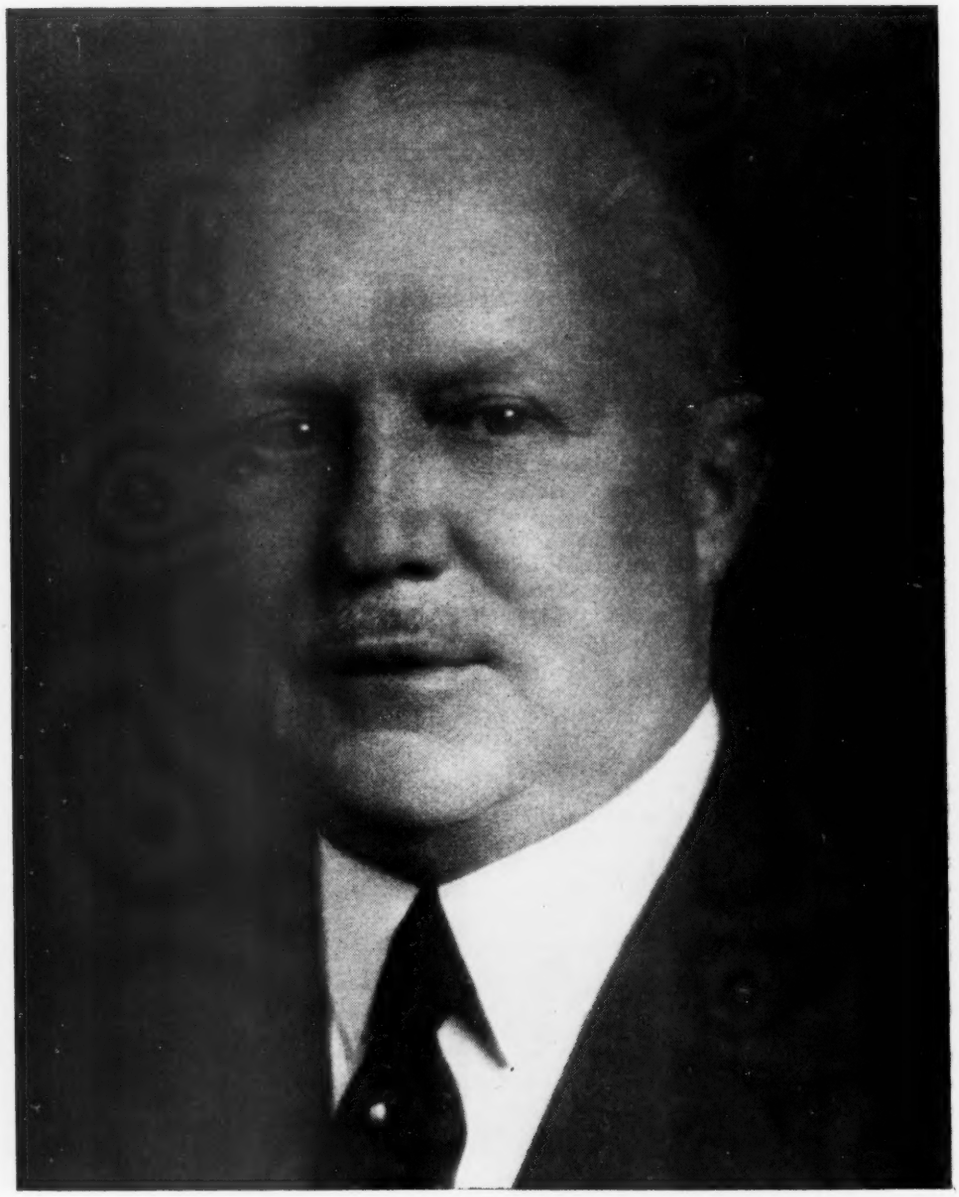


Edwin R. Cox

● FIFTY-ONE years ago on July 5 Edwin R. Cox went to work for the Atlantic Refining Co. at its Point Breeze refinery. His job was to carry samples of refined oil from the stills to the laboratory for check analysis. He spent 15 years in the refinery yard running stills and doing other work before entering the office as yield and cost clerk. Later he became a statistician, then assistant treasurer and finally was elected to his present office of vice-president.

Outside of the oil industry Mr. Cox has been interested in politics for more than 40 years. He served many years on the school board as member, secretary and president. He was a member of the state legislature for 12 years and for the past 16 years has been a member of Philadelphia City Council. He has been president of the council for the past eight years.

NATIONAL PETROLEUM NEWS

VOLUME 28 NUMBER 22

Equipment Ready for Tomorrow's Needs of the Oil Industry

By Teletype
TULSA, May 25

THE Ninth International Petroleum Exposition, which closed its gates here the night of May 23rd, was said universally by the exhibitors, who are manufacturers in many lines, to be the best industrial exposition they had ever attended.

Paid attendance for the eight days totaled 177,235, as compared with 154,000 in 1934. This does not include those who came in on exhibitor's passes, badges and special permits.

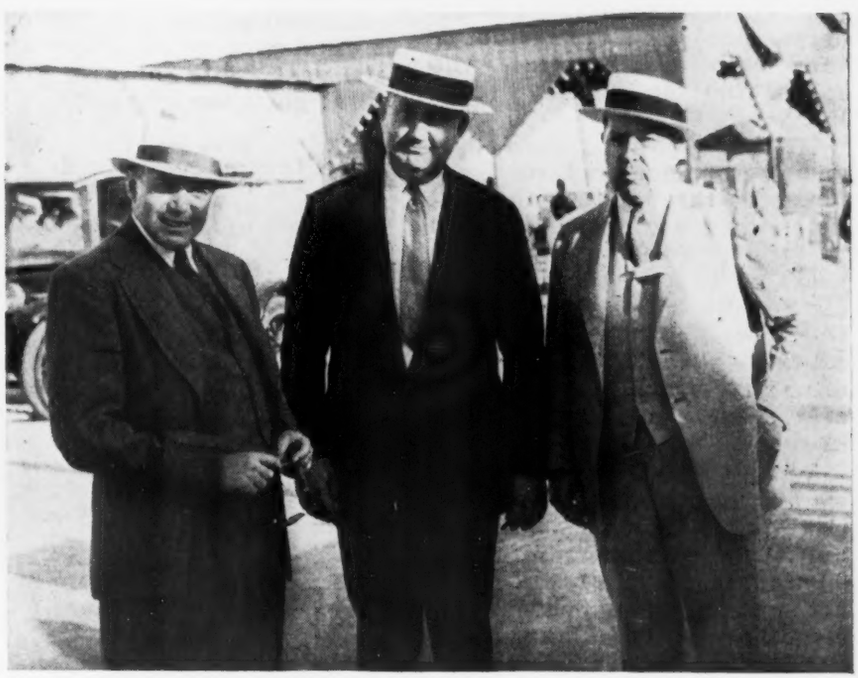
Even in the two years since the last previous Exposition was held, the improvement in engineering design was particularly noticeable in the heavy oil field equipment, which, despite its increased weight to handle greater drilling and producing depths, was more finished in appearance than even a few years ago.

However, all along the rows of exhibits, whether of equipment for the production, refining or marketing branches of the oil industry, the visitor marveled at the results of only two years' effort on the part of manufacturers in improving not only the efficiency but also the appearance of their product. Methods for displaying equipment had greatly improved also.

Figures tell the magnitude of the show and the extent to which American industry was represented. There were 546 exhibitors, including the one who discovered the possibilities late Friday, last, wedged his exhibit in at the very back of the grounds and caught only the final day's crowd. These exhibitors came from 136 cities in 28 states and the total capitalization represented was $9,715,000,000.

Thirteen foreign countries were represented officially and the registrations at hotels and at the grounds, by no means completely covering the out-of-town visitors, revealed that persons from 44 states were present.

The exposition provided the customary ceremonies honoring the old timers of the industry and the contest between safety teams of oil companies. Martin H. Mosier, 80 years old, Los Angeles operator who is still



Wm. B. Way, general manager of the Exposition (left), and W. G. Skelly, president of the Skelly Oil Co. and also president of the Exposition (right), took Carl Young, production secretary of the American Petroleum Institute, on a personally conducted tour of the grounds

active in the management of the several companies he controls, was chosen "Grand Old Man of the Industry." The title of "Pioneer of Pioneers" was conferred upon William H. Peiffer, 93 years old, who lives in Carthage, Mo. The third award, "Grand Old Man of Tulsa," was given to W. J. Stewart, who is a mere stripling of 76.

Twenty-three safety teams competed for prizes. Magnolia Petroleum Co.'s pipeline team from Beaumont was first, Humble Oil and Refining Co.'s Houston team was second and the third prize went to the refinery team from The Texas Co.'s west Tulsa plant.

Exposition directors have decided to lengthen the next show to two full weeks instead of the usual eight days. Additional space will be provided, both inside and outside.

Drilling Oil Wells Today Matter Of Engineering Precision

By LAWRENCE E. SMITH
N. P. N. Staff Writer

TULSA, May 23

THE ninth International Petroleum Exposition, which ended today, included that regular bit of sentiment, the Old Timers ceremonies. Some of the oldsters looked a bit bewildered as they moved slowly about the grounds — those of them who have been in retirement for some years. A few of them date back to Col. Drake's time.

The astonishment of these old boys who have been away from the fields for years is understandable. Things are not as they were, even to those who follow the oil industry regularly.

At this exposition the supply and equipment industry announced, through its displays, that it is ready with its end of the job of providing the nation's oil supply. Let the geologists and the geophysicists find the spots and the material is available. It has come off the drafting boards, through laboratory and field test and is now in shop and warehouse.

When some of the old timers were active a 4000-foot well was unknown. Today, 8000-foot holes are commonplace and 9000-foot producing wells are not unusual. In numerous instances, in Texas, Oklahoma and California, the 10,000-foot mark has been exceeded.

The equipment men today invite the industry to go 15,000 feet or more to produce oil commercially to meet the public's needs.

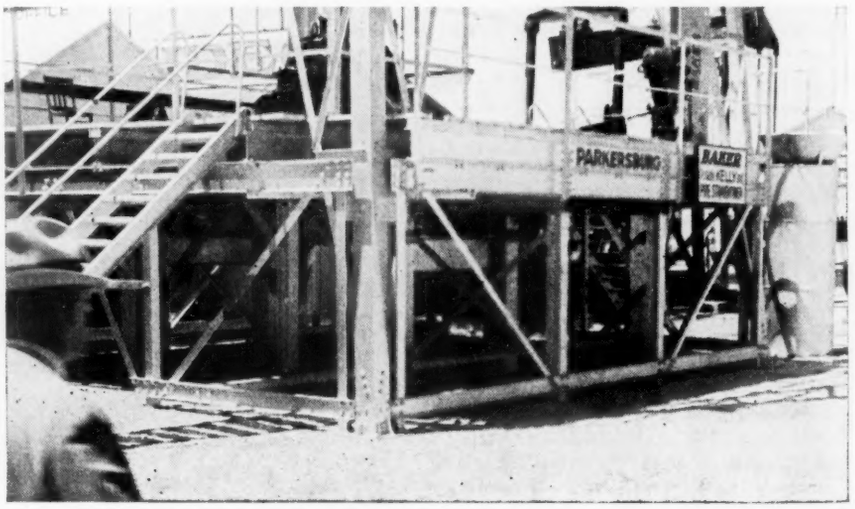
It has come about fairly quickly, this development of heavy-duty, precisely machined equipment for drilling and producing. An executive of one of the large oil companies owns the first rotary outfit ever used. It drilled some water wells in the Dakotas shortly before the opening of this century. The turntable is a small affair that can be carried by two men. The equivalent part of a rotary outfit on display at the Exposition this year, with necessary integral parts, weighed about 17 tons.

The influence of the depression years is evident. Supply companies for two or three years had less servicing of equipment to attend to; in consequence, their engineering and research departments were able to think and plan ahead against the time when drilling depths would be greater. Of necessity, oil producers became more efficient in their producing operations under low crude oil prices. The supply men have met that challenge too.

The Exposition, therefore, was the dress display of all that is new and modern. The exhibition included the very beginning of the oil well of today. One of the seismograph companies gave a demonstration out in the country of the way it locates structure which may be an oil reservoir. The whole performance was put on, including the drilling of the shallow hole in which the explosive is fired, producing thereby a miniature earthquake whose velocity is recorded and evidence is thereby obtained as to the dip of the below-surface formations. (No intent is to imply that only the geophysicists find structure; geologists play their part, and it is a highly important one.)

On the location which this seismograph crew might have made had it fired enough shots and made its maps, the oil operator would have placed material. He would have had every modern means of mechanical transportation. Trucks capable of handling the heaviest equipment and tractors with endless

(*Continued on page* 15)



Seven-foot sub-structure for derricks, which eliminates the use of cellar under the rig

The Editor's Viewpoint

Putting Emphasis on Profits, Not Gallonage

By Warren C. Flatt, *Editor*

PLEASE turn to page 59 of this issue and read in connection with the following comments. If you do and if every one adopts such a plan as is there outlined, the marketing of petroleum products will soon cease to be in the chaos it has for all these years and it will become profitable for all efficient operators.

On page 59 is the story of the bonus-for-profit system in the marketing department installed Jan. 1st, last year and amplified this year by President Moran, of the Continental Oil Co. The bonus plan is not original with Continental, not even in the oil business. It has been practiced in most other lines of business for a great many years. What makes this story significant is that the Continental is probably the largest oil company in the country today to use it. Only one or two other large companies today are using such a plan. Of course the smaller marketing companies are, necessarily, because of their largely owner management.

The Continental Oil Co. this year is paying a bonus to its general office sales staff from the vice-president in charge of marketing down, a bonus to its field supervisory force that is responsible for sales and a bonus on individual performance to the division managers and staff. The bonus is paid on profits, if any, in the marketing department and in the divisions, the profits being obtained after charging all expenses to the department. The staff is paid an additional bonus for increase in gallonage and a smaller bonus for a drop in gallonage. But the bonuses are all based on NET PROFIT to the marketing department for its operations alone. The plan disregards profits and losses in all the other divisions of the company.

This bonus system, which NATIONAL PETROLEUM NEWS has been advocating for a great many years, puts the emphasis where it belongs, on profits and not on gallonage. For all these many years the emphasis in gasoline sales has been on gallonage alone, for the companies were deluded into thinking that, if they sold their crude oil production at a sufficient profit, it did not matter what the other departments did.

For years the industry has been ravished by producers of crude oil operating in the tank car and retail markets of the country. Individually there probably was justification for what they did but from a long time view they not only were helping to wreck the industry but helping to wreck themselves, for they made it increasingly harder to make a profit.

The only way a profit was possible in recent years was to have a high grade crude that could be produced in big quantities from shallow depths at low cost. The last such field was East Texas and, instead of being an aid to the industry, it ruined it. Today the new fields are being found at great depth, more than a mile to even two miles. This means more cost per barrel, no matter how large the well. Wells of the future, from present indications, will be from still greater and more costly depths. Drilling equipment manufacturers today are making equipment strong and heavy enough to drill three miles.

One thing is certain, the producer of oil at two and three-mile depths, no matter how reckless he may be in the retail market, will not be able to cause much trouble because his sales price will have to be much higher than any price today in order for him to make a profit even on his production alone let alone his other activities, in pipeline, refining and marketing operations.

The speed with which flush and cheap fields were found, often by new operators, has kept the marketing of petroleum products in a turmoil but now, with new production seemingly to come largely from greater and more expensive depths, every business reason will force all major companies to drop their backwoods management policies and put each of their operations on its own base. Otherwise the sheriff will be operating their properties and right soon.

When the cry from the owners and the production department always was for gallonage and more gallonage it was to be expected that the sales departments would go out and give away not only the company's shirt but their own as well. Added to the cry was increasing compensation to the managers and men working in the sales department for gallonage increase regardless of its cost. No wonder then that we put gasoline pumps at every hot dog stand and even, on occasion, provided the stand itself. No wonder that we put unnecessary sums into elaborate service stations and built too many of them. Yes even too much money into the advertising to the public of our products.

But with the industry's experience with the

cheap and excellent crude of the East Texas field, with the "hot gasoline" from there, and the adversities of the general business depression, the executives of the majors seem to be giving more thought to profit and to the ways of insuring it. There has been no better way known in business history, if one wants a profit from an operation, than to pay those responsible for the operation on the basis of the profit and to penalize them for losses, and then not stand for too much of a loss before firing them and getting new executives. Most every other business has been using this for years and has found that it works.

If the major companies will turn their marketing operations over to their sales staffs, put all responsible persons there on a bonus basis, or some other profit participation basis with penalties for losses, and then give these men the authority, they will work the marketing departments into a profitable position. If they do not then get new men. But give the marketing men a chance to clean up the present mess. They know what is wrong and they know what to do to straighten it up, at least all of those to whom the writer has talked, know the cure. They are not in sympathy with the price tactics of their superiors, the national discount fever, the cut prices to tire companies, the less than tank car prices to government regardless of size of delivery and the wide margin to dealers. Give these executives a chance to perform for themselves and pay them accordingly and we know the story of this oil marketing will be decidedly different in another year or two.

It has long been the opinion of some persons who have watched marketing in various lines, that it is so complex that it cannot be properly run over a wide area from a central office. This is one operation where bigness is a decided disadvantage and that is what the major oil companies have found out but they have been slow to act on the knowledge. The oil companies could well take a leaf from the retail field where detailed personal management is always on the job—always or the venture goes on the rocks—and where every department runs on its own profit and loss basis.

Smaller oil marketing territories, with the head of the territory having plenty of authority and paid on profit performance only, would seem to be the answer for the major oil companies. Then, if the producing department brought in more crude than this efficient marketing department could sell at a profit, the point could very properly be made that the demands of true conservation would call for that price-wrecking crude being kept in the ground. As long as crude oil wrecks the marketing of its products it cannot be well argued that the crude has been properly conserved to the best uses of mankind.

Report has it that another big company, that has done a pretty good job at decentralizing authority, is working on a bonus system for its marketing department. We listen attentively for similar reports from all the majors.

In the meantime our congratulations to President Moran and his Continental Oil Co. for their marketing bonus system. It should go a long way to insure a better profit for that company, in the reorganizing of which President Moran has done an excellent job. It will be a good example to others of the majors, the while Continental sales executives, by their own profit seeking efforts, are showing the rest of the oil industry some new wrinkles in the marketing operation.

Let "Alky-Gas" Make its Way Without Subsidy

By Arch L. Foster, *N. P. N. Technical Editor*

THE propaganda for "alky-gas," and the subsidizing of this branch of alcohol production by state and federal enactment is again gathering momentum. We are told that efforts are to be made this year to induce the legislatures of a large number of states to exempt "alky-gas," or the alcohol constituent of such motor fuels, from the various state gasoline taxes. This constitutes nothing less than a direct subsidy.

European nations have been trying all manner of schemes, plans, and subterfuges to make themselves self-sustaining. Italy especially is making almost superhuman efforts, under Fascism, to become independent of outside supply sources, for fuels, metals, and other indispensable raw materials. Under the pressure of the modern international wave of jealous nationalism, there may be some excuse for Italy's attitude in promoting alcohol as motor fuel.

In the United States, producing 70 per cent or so of the world's petroleum, and with tremendous reserves in sight, the excuse for developing motor fuel alcohol as a safeguard against the time when petroleum will be no more appears to be defenseless, even as a political issue. But political issues require usually very little basis in fact or importance, to warrant politicos shouting them from the housetops.

Therefore, it appears that the chemistry and engineering of motor fuel alcohol is chiefly political chemistry, a not unheard-of "science" in American annals. To the unbiased observer, the proof that alcohol is an inefficient motor compared to gasoline appears to be conclusive. Its heat energy of about 85,000 B.t.u. per gallon

is far less than the about 135,000 B.t.u. for petroleum motor fuel.

Drs. Lichty and Ziurys, at the American Chemical Society in Kansas City, showed recently that 60 per cent more alcohol by volume is consumed in obtaining the same power, in comparison to gasoline fuel. Dr. Bridgeman, a scientist with a government agency, showed that the power derived in even small percentage blends is no greater than with pure gasoline. Other drawbacks exist, he found. Drs. Egloff and Morrell showed that technically and economically the use of alcohol as motor fuel is disadvantageous. Numerous other phases of the use of alcohol militate against it.

Technologists are more frequently expressing the conviction that "alky-gas" fuels should run the race with other motor fuels on a competitive basis, without subsidy. If alcohol is a superior fuel the motoring public will soon discover that fact, and will demand it, will buy it, even at a premium, and future of power alcohol will become more rosy as time goes on. If it is not a competitive fuel, the public will also discover the fact, and the effort to foist it on the public will die naturally.

A few weeks ago NATIONAL PETROLEUM NEWS printed a statement from a European technologist, which stated in essence that the only interests which appeared to reap a profitable harvest from "alky-gas" are the alcohol makers and the makers of equipment for producing alcohol. This is true, it seems, even in countries where petroleum fuels cost two and three times as much as the same fuels do in this country, and where alcohol manufacturng costs are comparatively much less than in America.

According to statements made, the alcohol distillers in Kansas expect to guarantee a minimum price of 45 cents per bushel for corn; the current price is now about 60 cents; corn for alcohol making will still be a waste of surplus material, at such prices, and the farmer will take a loss to boost the use of "alky-gas." The motorist will take a loss in engine power and mileage; he will also probably pay more for "alky-gas," to cover the additional cost of the alcohol content. And all for whose benefit?

The only excuse for alcohol as motor fuels is on a competitive basis. Let "alky-gas" stand or fall on this foundation, without subsidy, for no subsidy is necessary or desirable for the common weal.

Tulsa Exposition

(*Continued from page* 12)

belt traction for traversing country without highways were offered, quite noisily at times, for his approval on the Exposition grounds.

Today's derricks reflect the work done by the metallurgist and the engineer. The old timers noted, sadly, the absence of wood derricks, "nail rigs," as the field men say. Graceful and shining in their aluminum paint, capable of withstanding the stresses and strains of handling thousands of feet of heavy drill pipe and casing and, most important, of standing up under the terrific impacts provided by sudden jerks on a string of pipe that is stuck, the derrick of today takes care of its part of the job.

An offering that is relatively new, shown by some derrick manufacturers, was the seven-foot sub-structure which eleminates the time-honored cellar. Its advantages are obvious. Gas accumulation, possible in cellars, is avoided, making for safety to workmen and lessened fire hazard. In closely spaced development, such as the town-lot drilling now under way in Oklahoma City, this derrick feature is a virtual necessity.

A dominant note of this entire Exposition was power. The diesel engine is rapidly coming into use for drilling. Here many of the prophets were fooled. A few years back they were saying that diesel power was suitable only for stationary plants; that it was too heavy, hence not easy to move; that preheating and filtering of fuel could not be provided except in power plants and other permanent locations.

Well, here it is. The weight has been greatly reduced and that objection removed. Also there are portable, easily moved, filtering and pre-heating units. There is a distinct trend toward use of diesel engines for drilling. Of course, the old faithful steam outfit is still much alive and many are the improvements in recent years in boilers, effecting great economies of water and fuel. But where water is an item of outstanding importance, in the arid sections where much drilling is now done, contractors are thinking hard about the diesel and its use is constantly increasing.

The size and weight of all equipment used in modern oil field development is most impressive, particularly when it is concentrated on a few acres as at the Exposition. Engines range in capacity up to 350 horsepower. Crown blocks weigh up to two and one-half tons and are designed with safety factor of two to handle a working load of 240 tons. Slush pumps to handle the circulation system of a rotary hole are available with suction connection as high as 10 inches and weighing as much as 18 tons.

There are so many items which make up a modern string of rotary tools that mere cataloging would occupy columns. This deep well development is a blue chip game nowadays. We heard the other day of the shock administered to the head of one of the large companies when the chief production executive walked in and asked for one million dollars with which to buy the equipment for 10 rotary outfits. That wasn't to include any drilling costs, merely the machinery and the pipe. An outfit, exclusive of pipe and derrick, was bought by a contractor a few days ago for $135,000. He is equipped to drill anybody a 15,000-foot hole, but what a headache if he gets into trouble and fails to complete to contract depth.

Hand-in-hand with the de-

velopment of the equipment, though, came the invention and perfection of numerous safeguards against losing holes. The vital circulation system has been referred to. Now, mud is mud to a farmer trying to get to town, but it is a matter of such vast importance in oil well drilling that entire sessions of a petroleum engineers' convention are devoted to it. It is the mud which holds up the walls of a rotary hole and holds back gas pressure which might cause the hole to cave, "freezing" the drill pipe and perhaps causing abandonment of the job. It is important in several respects besides the carrying of drill cuttings to the surface.

On display at the Exposition were several aids to proper mud mixing. The use of a screen was started just a few years back. This writer remembers seeing about the first one, a rather crude affair, made in a field shop. The mud brings to the surface cuttings of sand, lime and shale of considerable size and it is important that these be not put into the slush pit, there to be picked up by the pumps and put back into the drill pipe where they would in time stop circulation. The old way was to settle out the cuttings in a discharge pit, but this was not wholly successful. The screen, which sizes the mud and shakes the rock into a pile outside the pit, is final guarantee against trouble of this form.

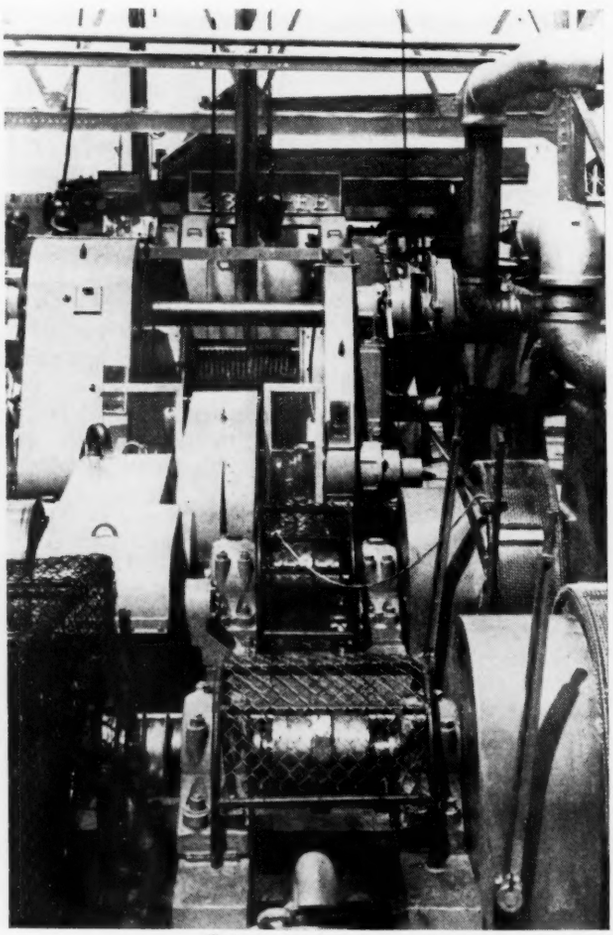
Mud is weighted with various trade-marked minerals to provide weight enough to do all the things it is supposed to do. Calculation of pressures to be overcome is now routine practice and the prescription for the mud is made up just about as the druggist makes up your physician's prescription. Gas blowouts and wild wells are rarities today; a few years back they were common.

No small part of the success in completing wells and producing them in a manner that effects true conservation is due to the methods of cementing wells. The technic has been worked out over a period of years and it is a very rare thing to hear of an incomplete job of shutting off water or of blow-outs due to pipe not being securely anchored in place.

Faulty casing jobs formerly were the cause of much trouble in production and producing sands have been prematurely flooded with water because the sand above the oil pay from which the water came was not properly sealed off by casing. Cementing, without doubt, has saved many million barrels of oil and averted much expense and danger to workers. The latest in this art was fully demonstrated at the Exposition.

Dealing still with the underground jobs, that of tubing high-pressure wells ranks prominently in engineering advances of the past few years. A company which undertakes this work on contract had its display space and its representatives to explain that the company was prepared to tube wells

This "gun" fires steel bullets through casing at any desired depth and is the modern way of perforating pipe to test showings after pipe has been set



A far cry from the "coffee grinder" rotaries of just a few years ago. Diesel-powered, this rotary is capable of drilling 15,000 feet or more and will soon be in service

regardless of the pressures.

On display were methods of surveying wells to make certain they were not going crooked. Great trouble and expense comes from this quarter. Modern surveying tells the driller whether his bit is wandering from the vertical and he can correct the error before it is too late. Or, with the same methods, he can deflect the hole purposely for some given purpose. Dry holes have been turned into producers by coming back up and redrilling part of the distance at a fraction of the cost of a new hole. Wild wells have been tamed by drilling a relief well to hit the wild one at a predetermined distance underground, then killing the first one by pumping in mud or water through the relief well. The exactness with which this can be done is a matter of amazement, even to field men.

In a rotary hole it is difficult to tell the worth of every formation bearing oil or gas, especially when the showings encountered are "stray" ones not previously logged in the region. An electrical method of measuring, with high degree of accuracy, the oil and water content of sands, is a development of the past few years and it has come into wide use since the previous Exposition.

The modern method of perforating casing was on display and was a matter of surprise to many. It is a steel chamber into the sides of which are screwed several magazines, each loaded with powder and steel bullet. Detonation is by electric spark and the bullets make a neat hole in the pipe. As many as 2000 perforations have thus been made in one well.

The business end of the rotary drill stem is the bit. There are several designs, modified slightly in recent years. Chief improvement has been contributed by the metallurgist; longer life of both fish-tail and cone rock bits has been provided.

The Exposition contained some things that were new in surface equipment for producing wells and a number of improvements in older designs. Pumping units today resemble those of a few years back only in the fact that they have an up-and-down motion. Ball and roller bearings, reducing the power required for deep well pumping; better counterbalancing and easier motion, reducing rod breakage; greater variability in length and frequency of stroke are among chief improvements. Greater weight, of course, has been provided, for no longer does an oak sapling serve as a jack beam. Even such seemingly trivial matters have been given due attention as throw-off hooks and blocks, used to disengage surface rods at central power pumping installations. It used to be that a pumper was a mere beginner unless he had lost one or more fingers throwing off rods. There is no chance today to get caught.

When the natural flow ceases from the deep ones this heavy unit steps in to handle the mile or more of rods

The separator people continually improve their wares and a better separation of oil and gas is obtained before the oil from the well goes into the lease tank. One manufacturer showed a separator which embodied a new feature. This is an oil metering chamber at the bottom. After the gas has been taken off the oil flows into the lower chamber which is discharged when one barrel has accumulated. Accuracy within one per cent is claimed. The tank manufacturers, the makers of tank fittings, as usual were prominent in this year's show. Their part in the conservation program can scarcely be stressed too much. Evaporation losses today are unimportant.

Developments in design and manufacture of equipment move rapidly. Improvements in everything, from the wrench which tightens the bolts to the engine which supplies the power come at frequent intervals, for there are many keen minds at work.

This year's Exposition contained, in finished form, the results of the engineer's inventions and the field man's improvisations.

Control Instruments Demonstrated For Refinery of Tomorrow

By ARCH L. FOSTER
N. P. N. Staff Writer

MANY a refinery man who visited the Oil Exposition at Tulsa probably indulged in a day dream of the refining plant he would build if given carte blanche to start from the ground and use materials and equipment displayed and demonstrated there.

As fast as refining technique has advanced in past years, the development of new instruments and equipment, new materials, including particularly alloys, and so on continuously enables the plant of Tomorrow to be a more efficiently operating unit than Today's refinery.

To the visitor at the Exposition whose experience with refineries goes back to the early days of refining—not so many years ago either—the modern refining plant possible through the advances presented in the displays at the Exposition stands out in even greater comparison.

Instrumentation is the heart and mechanical brains of the modern refinery. After the plant processes themselves, the whole plant may be said to be built around the nucleus of its instruments. In fact, in a large number of cases, successful processes have often waited on the results of the strenuous efforts of the instrument designers, in order to attain the control necessary to make the process successful.

Never yet has the American oil industry seen such a wealth and variety of automatic control, recording, indicating and correcting instruments as was displayed at the Tulsa Exposition.

One of the problems always before the designer of refineries has been not only centralization of control but of control instruments. Plant operation is simplified and bettered if all important information is available in one spot, where each item can be checked and considered in the light of all others—hence the central control board.

New instruments are perfected, whereby control and record data for which the operator formerly had to visit relatively distant points may now be placed on the central board with other instruments. One of the answers to this is electrical transmission of impulses, of control and recording action over long distances.

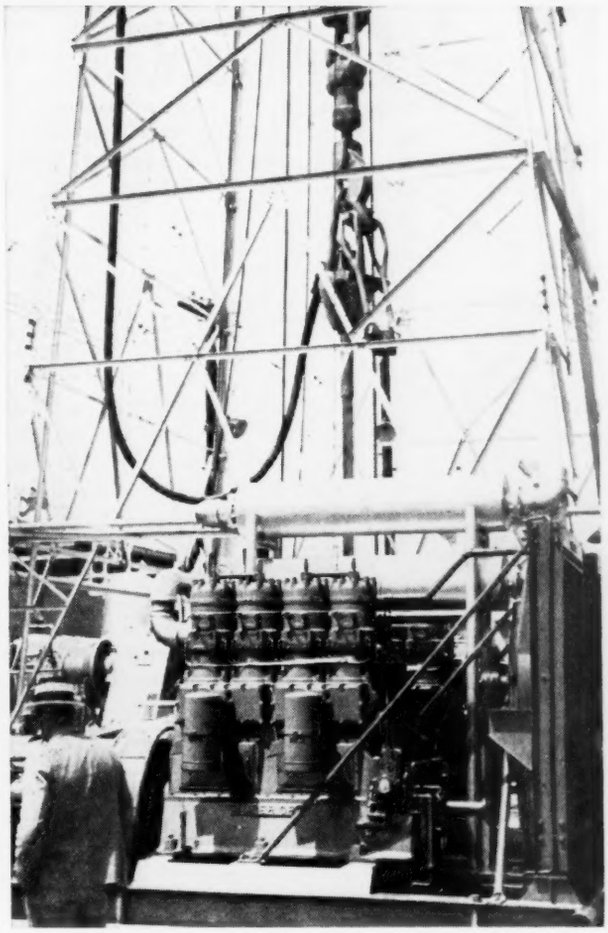
In one case the refinery may decide upon a distance control by which the impulses registering the control, and the action which brings the conditions back to the set control point, are transmitted, in each direction over any available set of electric wires, such as telephone wires, which are in use for other purposes as well. For a flow control job, a distance installation may be selected, wherein a magnetic clutch is used to control and record flow of a very volatile liquid—propane under pressure—in such a manner that no lag occurs in a situation where older types would require an entirely impractical length of meter piping (100 to 150 yards).

Still another control unit is redesigned to make for longer float travel, increasing sensitivity, and reducing variation in the flow rate. For handling gases in the refinery or pipeline, the typical meter introduces errors in recording due to variations in the gas pressure. With a new instrument connected to the meter, these pressure variation errors are eliminated and no calibration of the chart is necessary after the record is made.

To get away from the liquid level controller disadvantage of inability to transmit indications for long distances, an old principle, used in other types of controller-indicators, has been adapted to this problem by the use of electrical transmission, instead of using the older piping-filled-with-gas-or-liquid, a setup which restricted distance and offered more serious maintenance problems.

Delicate sensitivity and decisive action actuated by the minimum strength of impulse are all-important in pyrometric

The men in the picture, left to right, are W. A. Irvin, president of the United States Steel Corp.; R. Otis McClintock, president of the First National Bank, Tulsa; C. F. Camp, the C. F. Camp Co., Tulsa; W. G. Skelly, president of the Skelly Oil Co. and of the Exposition; Gov. E. W. Marland of Oklahoma, and Col. Paul Weeks, the Caterpillar Co. The two young ladies demonstrated the fun of riding a heavy-duty tractor



Diesel power was a dominating note of the Exposition this year

Ease of motion of this pumping unit was dramatized by giving rides to the children

recording-controlling. The refiner may decide, for one application, on a potentiometer recorder-controller actuated by a photo-electric cell and mirror galvanometer, especially free from wear, lag, or instrument inertia, to achieve accuracy and speed, and to eliminate "hunting" or wide variation from the control temperature settings.

Maintenance and repair of delicate controllers is a problem, frequently that of getting at parts with a minimum of trouble and time expense. One of these new potentiometers, displayed at the Exposition, has been designed to permit instant access to every part in it, to remove or correct the part or setting without disassembling the unit. The result is a great saving in time, and greater saving in the time the instrument is out of service, frequently meaning less time the refinery unit is shut down.

Even in such small equipment as thermometers and hydrometers careful analysis of the needs of the user have resulted in changes in the interest of accuracy, speed or ease of use, all presented to the refiner at the Exposition. For instance, thermometers are now being furnished with a three-lens type of front surface on the glass tube, by which bore reflection is eliminated and the reading can be made easily with both eyes open without error or trouble. Hydrometers heretofore have had a cylindrical paper scale, which might slip out of place, completely destroying the accuracy of the instrument. For this scale has been substituted a flat strip of heavy paper, extending into the weighting alloy in the bottom, in which it is set fast. Thus the scale cannot slip or sag, insuring a correct hydrometer during its entire life. If a thermometer scale is also included in the instrument, it is mounted in the same manner and slotted on the longer gravity scale.

One of the drawbacks of the customary carbon dioxide recorder in many cases is that the gas must be dried before registering in the machine. Our Tomorrow's refinery will be equipped with a new type of recorder which operates on saturated gas only, avoiding the necessity for drying tubes, with their likelihood of exhaustion of efficiency before being changed by the operator.

The long throw of the indicating mechanism of the older type level controller is improved in Tomorrow's refinery by the use of a shorter throw, and by extremely sensitive and easy operating ball bearings, reducing the variation of the instrument and of its control record.

Converting or integrating flowmeter data into exact quantities of fluid delivered has been a most important matter in the refinery, with its relationship to correct calculations of throughput, yields, percentage of conversion, and so on. The new refinery has available

(*Continued on page* 65)

Banners posted at 200 Tulsa stations created curiosity regarding the new "Ord r"

5883 Tulsans and Expo. Visitors Join Order of "Itching Foot"

TULSA, May 25

THE ORDER of the Itching Foot closed its first week of life with almost 6000 members, all in good standing having pledged to take their vacations by automobile.

Nearly all of these signed up of their own accord at the boqth of NATIONAL PETROLEUM NEWS at the grounds of the Tulsa Oil Exposition; the remainder signed at nearly 200 of the city's service stations. The only sales effort used was the flying of banners, "Are You an Itching Footer" at these service stations, similar banners at the NPN booth and a fourth-page ad in each of the city's two newspapers the opening Saturday of the Exposition.

From this it can be safely judged that the idea has an appeal, both to the public and to oil industry employes; also that the name is catching, as it flowed off tongues without thought. The name became a byword, and in a helpful and good advertising way, about Tulsa.

Many stories have turned up this early about the good the idea has done in making people, particularly oil people, stop and think and decide that they could and would drive more. One oil producer said a group of men who were going east to a convention were talking over their train arrangements the other night when one said, "Well, how about being an Itching Footer?" Whereupon the oil men in the crowd took up the thought and insisted they would drive, which is how the matter now stands.

Details of these 5883 applications for membership in this nomadic order of the Itching Foot and where their signers are going on their vacations are being tabulated now. Study of them will be delayed a little by the writer's having to prepare for and appear before the Madison, Wis., federal grand jury investigating the oil industry.

As soon as possible plans will be announced for further extension of the order. Tulsa was used as a laboratory and the testing seems to be satisfactory. The final plan will have to be perfected in some particulars. In the meantime, to all those who are asking the right to use the new order and its name and the windshield stickers, we must ask a temporary delay. Yours for the Itching Foot. W. C. P.

Crowds were around the booth of the NATIONAL PETROLEUM NEWS *at the Exposition most of the time, signing applications to become members of the Order of the Itching Foot, which was introduced in Tulsa during the Exposition by NPN to get people to take their vacations by driving*

13 Per Cent Increase in June Gasoline Demand Forecast

WASHINGTON, May 23 DOMESTIC demand for motor fuel in June will total 42,690,000 barrels as compared with an indicated demand of 37,884,000 barrels in June, 1935, according to the U. S. Bureau of Mines.

While the June demand forecast is 13 per cent above last year, the Bureau said that it is "only" 9 per cent higher than the "normal" for June.

Despite record-breaking crude oil production in recent weeks, the bureau states that production required to meet demand for June is 2,838,300 barrels daily, which is 12,000 barrels above the recommendation for May and 187,300 barrels (7 per cent) above the federal allowable set under the oil code last year.

This increase, which the bureau attributes to "seasonal and normal gains in gasoline consumption", is offset somewhat by recommendations that withdrawals from gasoline and crude-oil stocks be increased.

"For the last four weeks (up to May 9)," the bureau explained in its report, "crude-oil production has averaged about 2,992,000 barrels daily, stocks have increased at the rate of 109,000 barrels daily, indicating an actual crude-oil demand of 2,883,000 barrels daily. This was about 20,000 barrels above the Bureau's estimate of demand, but if the Bureau's suggestions as to reducing gasoline stocks had been followed the crude-oil demand would have been less than calculated."

The report said that it appears doubtful that the bureau's recommendation that gasoline stocks be reduced 3,100,000 barrels will be met in May and predicted that stocks on May 31 will be above 71,000,000 barrels, or 9,500,000 barrels more than on May 31, 1935.

"In view of the excessive stocks," the report added, "the recommended withdrawal for June has been raised to 4,010,000 barrels, which is approximately 1,000,000 barrels above both the normal and the recommendation for May.

A withdrawal of 75,000 barrels daily from crude stocks is recommended. For the last two months, crude stocks have *increased* at the rate of 75,000 barrels daily, it was pointed out.

The Bureau of Mines' estimate as to required production during June for each producing State with comparative recommendations for May, was, as follows:

State	May	June
Texas	1,132,500	1,125,700
Oklahoma	538,300	552,500
California	544,000	535,500
Louisiana	170,500	175,700
Kansas	150,100	153,100
New Mexico	65,900	68,300
Pennsylvania	43,000	42,600
Wyoming	35,600	37,800
Michigan	38,200	37,000
Arkansas	31,000	31,800
Kentucky	13,900	14,000
Montana	12,900	13,000
Illinois	11,700	12,300
New York	11,800	11,900
Ohio	10,500	10,500
West Virginia	9,900	9,900
Colorado	4,400	4,700
Indiana	2,100	2,000
	2,826,300	2,838,300

Including 2,050,000 barrels of gasoline for export, and making other adjustments, the Bureau estimated the required production of finished and unfinished gasoline at 39,830,000 barrels during June. This was distributed among the refining districts, as follows:

	Barrels
East Coast	6,050,000
Appalachian	1,600,000
Ind.-Illinois	6,490,000
Oklahoma	2,770,000
Kans.-Mo.	2,500,000
Texas Inland	3,110,000
Texas Gulf	8,320,000
La. Gulf	1,660,000
Ark.-La. Inland	1,010,000
Rocky Mountain	920,000
California	5,400,000
TOTAL	39,830,000

Applying a percentage of 5.7 for June, the report estimated that 2,270,000 barrels of natural gasoline will be utilized at refineries, leaving 37,560,000 barrels of gasoline to be made from crude-oil. Crude runs will total 84,200,000 barrels of crude, it was estimated. Runs to stills of foreign crude will total 2,800,000 barrels in June while crude exports will amount to 4,000,000 barrels, the bureau predicted. Losses and consumption of crude as fuel were figured at 2,000,000 barrels.

Oil Industry Investment Now 13 Billions

NEW YORK, May 23.—The total investment in the Petroleum industry in the United States in 1935 amounted to $13,276,000,000, according to the latest taxation bulletin of the American Petroleum Industries Committee. The estimates are based on a recent survey.

Over 40 per cent of the total investment was in production facilities, a total of $5,665,000,000 being represented by the investment in 330,070 producing oil and gas wells, undeveloped acreage, camps, warehouses, tankage on leases, oil in tankage and inventories in supplies and equipment.

Another item of $270,230,000 is accounted for by 766 natural gas plants, equipment and oil inventories. Oil pipelines aggregating 115,000 miles were valued at $941,000,000. The investment in 638 refineries, equipment and oil inventories was figured at $3,400,000,000.

An investment of $3,000,000,000 was recorded in the marketing division. Of this amount, $1,288,000,000 was listed as the value of 170,400 gasoline stations. A total of $431,900,000 was given for 26,200 bulk stations and gasoline pipelines covering 5000 miles represented another $65,000,000.

Other valuations included a fleet of 750 tankers at $530,000,000; 150,000 trucks and trailers at $375,000,000; 144,000 tank cars at $216,000,000; and gasoline pumps in dealers' outlets, buildings, oil inventories, salesmen's cars, etc. accounted for $154,100,000.

Rodessa Pool Output Curtailed Other Fields To Hold Down

TULSA, May 23

THE new Rodessa field continues to dominate the scene in the Mid-Continent and the southwest. The week was filled with rumor and denial but also with one important, concrete bit of news that seems to set a precedent.

Declaring the oil to be "contraband", Judge Randolph Bryant, of the eastern federal district of Texas, granted temporary injunction restraining the further interstate movement of 71,374 barrels of Rodessa crude. The oil was produced under the much discussed special order which the Louisiana conservation department signed March 24 authorizing the Pelican Oil & Gasoline Co. to produce 20,000 barrels daily for 60 days or until the order was modified.

The petition on which Judge Bryant granted the injunction was an attack on the validity of that order. It was filed by Richard A. Hill, special assistant to the U. S. attorney general. Mr. Hill acts in legal matters for the Federal Tender Board. It is the first time the federal government has brought into question the legality of a state conservation order. The Connally law prohibits the interstate movement of oil produced in excess of a valid state order or regulation; the only challenge the federal officials could offer to the movement of the oil produced by the Pelican under its special order was to assert that the order was not valid.

This the federal officials did by seeking to "freeze" the oil produced in excess of the regular field allowable and their petition named the specific amount of 71,374 barrels as excess oil produced by the Pelican from March 26 to 31, inclusive. It asserted the oil was moved from the properties where it was produced by the East Texas Pipe Line Co., to the Tide Water's Nettleton station in East Texas, then to the Texas Empire Pipe Line Co. for movement to the Port Arthur terminal of The Texas Co., from where the Tide Water was to move it coastwise by tanker.

The petition claimed the oil was in the possession of the Texas Empire or the Tide Water or both, exact location not known. It seemed to be developed that the oil was actually in the Nettleton and Sour Lake stations of the Tide Water and the court ordered it held there. When the suit was filed on May 16, attorneys for the defendants agreed to impound the oil, pending court ruling. The suit was dismissed as to The Texas Co. and Texas Empire Pipe Line Co., leaving Tide Water, East Texas Refining Co. and East Texas Pipe Line Co. as the parties named in the injunction.

THE government made numerous contentions as to the special order under which the Pelican produced more oil per well than did other Rodessa field operators. It said that it was beyond the authority of the Louisiana conservation commissioner to issue such an order; that it was not, in fact, signed by him but by his subordinate, J. A. Shaw; that the order was discriminatory and in violation of the 14th amendment to the U. S. constitution; that it was discriminatory, not only between one producer in the Rodessa field and others but between that field and other fields of the state; that the production by the Pelican under the order created waste.

With some or all of these contentions the court agreed, after listening to a long argument between U. S. Attorney Hill and Dillard Estes, representing the East Texas refining and pipeline companies, and hearing numerous witnesses on the waste proposition. The court asserted the oil in question "has not been produced validly or legally and the channels of interstate commerce are denied to it."

For some reason not yet explained the Pelican company cut back its production May 20 after running seven days at a high rate. There was a rumor that Gov. Leche had issued an order; this the governor denied. Other rumors were that the Pelican's wells were being injured by salt water, that storage was full. Whatever the reason, the flow was checked and field reports were that production May 22 was about 4500 barrels, which is near the regular field allowable of 350 per well daily. However, as some of the 13 wells on the Pelican's property are producing little or no oil, the 4500 barrels would be out of proportion to that taken from wells of other operators who are observing the allowable.

THE oil from this property has been moved by East Texas Pipe Line Co. to Jefferson, Texas and from there moved by rail to Good Hope, La. According to a statement made by Tide Water Oil Co. deliveries to that company were stopped May 10. The statement recited that Tide Water contracted, effective March 25, to buy 500,000 barrels of Rodessa crude from East Texas Refining Co. for delivery to Tide Water tanks in East Texas and at the regular market price, plus transportation. The contract required all deliveries to be covered by proper state and federal tenders. "Tide Water," said the statement, "was under the distinct impression that the oil it was purchasing would be produced under the general Rodessa proration orders.

"Although the special order with reference to Pelican's production had apparently been made on March 24, 1936, Tide Water had no knowledge or information regarding such an order prior to April 2, when the East Texas Refining Co. applied for an order before the Federal Tender Board at Kilgore.

"Tide Water refused to accept any Rodessa crude until covered by federal tenders. No federal tenders were obtained, but on April 11, Federal Judge Randolph Bryant issued

an order in which it was stated, in substance, that the federal tender board admitted it had no jurisdiction over Rodessa crude oil moving through the East Texas oil field in interstate commerce. The East Texas Refining Co. served Tide Water with a certified copy of this order and insisted that Tide Water accept oil under the contract.

"Tide Water commenced receiving oil on April 15 and deliveries were continued from that date until May 10. During that period, deliveries did not at any time exceed the cumulative daily allowable under general field orders for the leases to which the East Texas Pipe Line Co. was connected. No deliveries of Rodessa crude have been made to Tide Water since Pelican reopened its wells under the special order.

"The agreement referred to is the only agreement between Tide Water and East Texas Refining Co. or any of its affiliated companies for the purchase or delivery of Rodessa oil. Tide Water has not purchased, nor has it ever negotiated for the purchase of, Rodessa crude moved via tank cars."

Thus, the Rodessa specter is laid, at least temporarily, but other matters impend. Price cuts have been mentioned as possible, although by no one in position of authority among principal crude oil buyers. The several states having proration machinery, except Louisiana, have been buzzing for two weeks or more over the amount of crude oil coming into the market and action has been taken by Oklahoma and Texas to curb the volume. The Texas order, discussed in these columns last week, was effective May 20 and on that date was figured to be 1,143,995 barrels daily. The Bureau of Mines estimate of demand for Texas crude for June is 1,125,700 barrels. The Texas allowable set by the railroad commission is to carry through June.

The Bureau of Mines gave Oklahoma an increase of 14,200 barrels over the May figure, but the Oklahoma Corporation Commission, aware of the true situation, refused to accept the increase. Instead, it wrote an order for June for a total of five per cent less than the bureau estimate, making a total allowable of 524,875 barrels daily, a reduction of 13,425 barrels from the May allowable.

Kansas has not acted, but reports are that it will hold to its May figure for June, although the Bureau estimate was a 3000-barrel raise and reports from New Mexico are that it also will make a reduction.

Deeper Proration Coming Unless Rate of Drilling is Slowed

TULSA, May 23

A POINTED warning that the present rate of crude oil production must be checked was given May 21 by John M. Lovejoy, head of the Seaboard Oil Co. and president of the American Institute of Mining & Metallurgical Engineers. Mr. Lovejoy spoke at the dinner given by the Independent Petroleum Association of America.

The mid-year meeting of this association, which is headed by Charles F. Roeser, Fort Worth, was attended by about 500 members and guests. The regular business sessions were devoted to committee reports and to discussion of association activities.

Mr. Lovejoy discussed at some length the history of proration, endorsing it as a practical conservation measure. Its need at this time is urgent and will continue to increase, he said.

"We have a vast potential overproduction," said Mr. Lovejoy. "The industry completed 15,000 oil wells in the United States in 1935. It is reasonable to assume that we will complete an equal number this year. We can also assume that 10,000 of these completions are large enough initially so that they must be prorated. Each of these new wells demands its share of the total production. How is the industry to absorb the production from these new wells?

"Firstly, through the decline of old wells and abandonments.

"Secondly, through increased demand.

"Thirdly, through deeper proration of all wells.

"The decline in prorated wells is invisible. There is, of course, a decline in the potential of the prorated well but that is offset by the potential of the 10,000 new wells. In looking for decline then we are limited to the 290,000 odd wells which include all the small wells, strippers, and edge wells. I estimate the production from this group at about 900,000 barrels per day, or an average of three barrels each. After allowing for 5000 of the 15,000 new wells to stem the decline, it is reasonable to assume that this group will decline some 50,000 barrels per day in the period of one year.

"The consumption of oil products has shown an amazing increase during the last two years. This is partly attributable to the fact that the period coincides with general recovery from the depression and in my opinion that rate of increase will not continue. In order to have some figures to work with, let us assume an overall increase in demand for the next year of three per cent, or roughly, 150,000 barrels per day. We have found then, that through decline and through increased

Daily Average Production, Important Districts, American Petroleum Institute Figures

	Week Ended May 23	Week Ended May 16
	Barrels	Barrels
Okla. City	141,800	155,400
Total Okla.	558,700	560,500
East Texas	448,300	447,200
Total Texas	1,177,450	1,172,150
Rodessa	68,250	61,350
Total Louisiana	236,700	226,700
California	574,100	579,800
East of Rockies	2,433,050	2,428,250
Total U. S.	3,007,150	3,008,050
Crude Imports	89,715	85,860
Total New Supply	3,096,865	3,093,910

demand, we can assign 200,000 barrels per day more at the end of a year to prorated wells, but we will have by that time 10,000 more wells to prorate.

"There are now some 50,000 wells prorated to 2,000,000 barrels per day, or an average of 40 barrels each. At the end of a year we will have 60,000 wells prorated to 2,200,000 barrels, or an average of 36 barrels per well. Project similar calculations further into the future and you must conclude that we are facing deeper proration and relatively diminishing returns.

"In my opinion, then, deeper proration is inevitable. This affects the pocketbook of every oil producer. What can be done about it? There is only one answer and that is to slow down the rate of drilling new wells. If we do not, it is certain that our dollar return on both new and old ones will decline. . . .

"Some operators feel that, with our present drastic proration, a higher price should be paid for oil. I do not entirely subscribe to this proposal, much as I would like to, for the reason that higher prices would undoubtedly result in more aggressive development of fields and greater well density in areas where well potentials are the sole basis of proration. The additional income received would be more than used up by additional drilling and we would aggravate the very condition that we are trying to correct. Higher prices would also stimulate wildcatting accompanied by a probable increase in discovery rate, which is not desirable at this time. In my opinion, then, higher prices would tend to hasten deeper proration.

"Having mentioned price, it would seem to me appropriate at this time to call your attention to current production figures. We are producing approximately 120,000 barrels per day more than the current demand as estimated by the U. S. Bureau of Mines. After adding to gasoline stocks during the winter at unprecedented rates, the industry actually added 81,000 barrels per day of crude oil to stocks for every day in March and 61,000 barrels per day for the first 18 days of April.

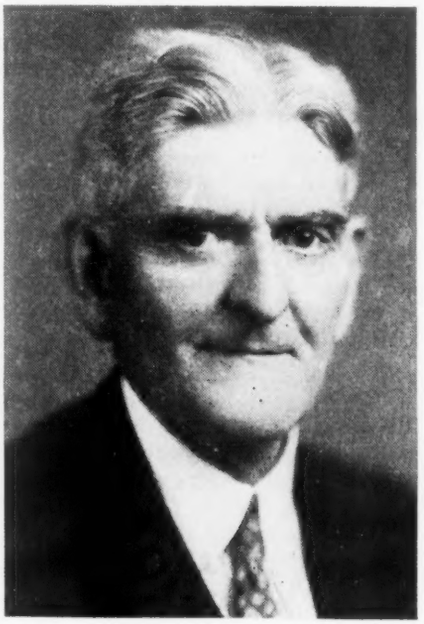
"It will require a large increased consumption this summer to bring our top-heavy gasoline stocks down to a reasonable figure and, unless we reduce current crude production to the approximate Bureau of Mines figure, which assumes no additions to stocks, we will be in serious trouble. In my opinion, no purchaser will be willing to continue additions to stocks at present prices."

Col. E. H. Hilpp, Pioneer Oil Marketer Dies

LOUISVILLE, May 21.—Col. E. H. Hilpp, vice-president and general manager of the Kentucky Consumers Oil Co., Inc., leading compounder and jobber here, died May 19 at Louisville, following several months' illness. He was 67 years old, and was a native of Lebanon, Ky.

Mr. Hilpp was well known among Independent oil men, being one of the oldest Independents in the country in point of service. He was active in oil association work and held the presidency for two years of the once powerful Independent Oil Men of America. He succeeded L. V. Nicholas to the presidency in 1928 and was re-elected in 1929. Previously he was chairman of the board.

In March, 1931, he was again elected chairman of the board of the Independent Oil Men of America and when that association was succeeded by the National Independent Oil Association in April, 1932, he remained on the board as a member.



Col. E. H. Hilpp

Mr. Hilpp also was the first president of the Kentucky Petroleum Marketers Association when it was organized June 18, 1927.

Mr. Hilpp's career began in Lebanon as a newspaper boy. Later he worked as a locomotive fireman and then as an employe of the Railway Mail Service, following which he entered the oil business.

He was active in the Republican party for 25 years and served several times on its executive committee. He was a member of the Louisville Board of Trade and of several fraternal organizations.

Surviving him are his wife, a daughter and two sons.

Burial was May 22 in St. Michael's Cemetery, Louisville.

Joseph W. Reeser Dies

CHARLESTON, W. Va., May 22.—Joseph Warren Reeser, superintendent of distribution for the United Fuel Gas Co., Charleston, and brother of Edwin B. Reeser, president of the Barnsdall Oil Corp., died May 18 at his home in Huntington, W. Va. at the age of 66. He had been in ill health for the past year.

A native of Pennsylvania, Mr. Reeser went to West Virginia in his late 20's, to help in the building of a 20-inch gas main to Cincinnati. Once in the gas business, he remained in it the rest of his life. In 1909 he was made general superintendent of the United Fuel Gas Co. upon its acquisition by the Columbia Gas & Electric Co.

He had previously served as superintendent of the Fayette County Gas Co., Connellsville, Pa. and in 1907 had been transferred to Johnstown, Pa. to supervise the piping of gas into the city. In 1908 he was transferred to Cincinnati, O. as superintendent of distribution.

Surviving are his wife, daughter and two sons; two brothers, a sister; and six grandchildren.

Maintenance of Price on Branded Goods Upheld by Calif. Court

By JACK N. WESTSMITH
N. P. N. Staff Writer

LOS ANGELES, May 22

EFFORTS of leading oil marketing companies to stop the practice of under-the-canopy price cutting it is believed will be strengthened by a recent decision of the California supreme court covering the rights of manufacturers in the matter of maintenance of retail prices on their branded products.

The result of this decision, which covers two practically identical cases, was to enjoin the sale of certain branded articles in violation of the California Fair Trade act of 1931, as amended in 1933.

The decision reversed the opinion of a lower court and it is anticipated the cases will be carried to the U. S. Supreme Court for final settlement, but in the meantime the recent ruling is effective in California.

An example of the way in which California oil companies can avail themselves of this decision to eliminate price cutting was demonstrated within the past month. An affiliate of one of the major companies sued a dealer who had purchased gasoline, bearing the brand of this marketer, from a broker and was selling it at less than the established market. On the basis of this decision the marketer was able to enjoin the dealer from price cutting and successfully insisted upon price maintenance.

Although some of the California marketing companies sell their branded products on a consignment basis, where the retailer is in reality an agent of the marketing company and, therefore, required to adhere to a designated selling price, others, and among these are the largest marketers, sell their products on a direct purchase and sale basis. It is in these latter cases that the California fair trade act, it is believed, would apply.

In the first of the two cases referred to involving the act, the court considered action brought by Max Factor & Co., a corporation engaged in the manufacture of cosmetics and toilet articles sold under adopted and registered trade-marks, against Clarence G. Kunsman, owner and operator of a retail drug store in Beverly Hills. Sales Builders, Inc., distributors of Max Factor products, was co-plaintiff in this action.

THE Fair Trade act provides that no contract relating to the sale or resale of a commodity which bears the trade-mark, brand or name of the producer or owner of such commodity, and which is in fair and open competition with commodities of the same general class produced by others shall be deemed in violation of any state law by reason of any provision which may be contained in such contract.

The act goes on to say among other things that such contracts would still be valid with provisions (1) "that the buyer will not sell such commodity except at the price stipulated by the vendor;" and (2) "that the vendee or producer require in delivery to whom he may resell such commodity to agree that he will not, in turn, resell except at the price stipulated by such vendor or by such vendee."

This statute, as originally passed, limited its application to persons who voluntarily enter into such contracts with respect to resale prices. An amendment to the Fair Trade act in 1933, designated as Section 1½, presented, in the opinion of the California Supreme Court, the crucial point of this case.

Section 1½ of the amended statute reads: "Wilfully and knowingly advertising, offering for sale or selling any commodity at less than the price stipulated in any contract entered into pursuant to the provisions of Section 1 of this act, whether the person so advertising, offering for sale or selling is or is not a party to such contract, is unfair competition and is actionable at the suit of any person damaged thereby."

Facts appearing from the allegations of the complaint showed Max Factor had, for a long time, used certain trade-marks in connection with the manufacture and sale of cosmetics and toilet articles and that the company had sold to Sales Builders, Inc., the exclusive rights for distributing the company's products in the United States. Included in this agreement was a transfer to the distributor of the right to use the trade-marks and entitled to any good-will pertaining to them.

To protect itself against price cutting practices in the drug trade, Sales Builders, Inc. stipulated in the terms of its contracts with the wholesale jobbing distributors and the retail druggists, or others selling the Factor products, that the distributors must sell the products only to retailers who would resell them at specified prices. The resellers also agreed in a written contract to sell the products at a specified price, it was claimed.

However, the defendant, a retail distributor of Factor products, was found to be selling these at prices conspicuously lower than other retail dealers in the state, and in many instances at less than the cost of the commodities to the defendant, with the result that other dealers were forced to meet this price competition.

It was brought out in the trial that the defendant had been offered a contract and an opportunity to deal in the plaintiff's goods on the same terms offered other dealers, but this offer had been refused and that the defendant also refused to adhere to the sale price fixed in the contracts in existence with other dealers. Although the distributors had refused to sell the Factor products to the defendant until he had entered into a contract, the defendant had been

able to buy the products from other sources and had continued to sell them at less than the retail sales price.

The court was of the opinion that there were certain fundamental concepts which were decisive of the case. It said:

"In the first place, this court has neither the power nor the duty to determine the wisdom of any economic policy; that function rests solely with the legislature. We recognize that economic and judicial thought is, and for many years has been, divided on the economic question as to the benefits to the consuming public of free and open competition, and its necessary corollary, price-cutting. The Sherman and Clayton Anti-Trust Acts passed by Congress, and the Cartwright Act passed by our state legislature, and many other similar statutes, are indications that the particular legislatures involved, at the time such statutes were passed, were of the view that, from a social standpoint, free and open competition was desirable.

"The basis of this view is that, in the long run, it is against public interest to allow the manufacturer, producer, or distributor to fix the resale price of an article. In recent years, there has developed, in opposition to the above views, the concept that a manufacturer of a trade-marked article that is sold in competition with articles of a similar nature and who has fixed a fair price at which he, as well as his distributor and retailer, can make a fair profit, has a property right against destruction by others who have no interest in it except to use it in a misleading way to deceive the public.

"The basic theory on which this concept rests is that, from a social standpoint, price cutting, in the long run, adversely affects the public interest, and that the public will be adequately protected against excessive prices by the ordinary play of fair and honest competition between manufacturers of similar products. This latter protection is found in Sec. 2 of the present act, which prohibits manufacturers contracting between themselves to fix the resale price."

In outlining its powers in the case as well as those of the legislature the court then quoted from the U. S. Supreme Court case of Nebbia v New York, in which Mr. Justice Roberts, speaking for the majority said: "So far as the requirements of due process are concerned, and in the absence of other constitutional restrictions, a state is free to adopt whatever economic policy may reasonably be deemed to promote public welfare, and to enforce that policy by legislation adapted to its purpose. The courts are without authority either to declare such policy, or, when it is declared by the legislature, to override it.

"If the laws passed are seen to have a reasonable relation to a proper legislative purpose, and are neither arbitrary nor discriminatory, the requirements of due process are satisfied, and judicial determination to that effect renders a court functus officio. . . . Price control, like any other form of regulation, is unconstitutional only if arbitrary, discriminatory, or demonstrably irrelevant to the policy the legislature is free to adopt, and hence an unnecessary and unwarranted interference with individual liberty."

"IN THE second place," the California court said, "it must be kept in mind that the present statute is one passed in the exercise of the state's police power, and so differs fundamentally from statutes passed by the federal government. The latter is, of course, limited by the powers enumerated in the Constitution, while the states are not subject to such limitation.

"When the statute is viewed from the standpoint of police power, it is at once apparent that it is not a complete answer to the question of constitutionality to merely point out that the statute restricts a retailer from selling property of a certain class owned by him at prices fixed by himself, and so, of course, restricts his freedom of contract.

"There is no constitutional right to own property, as such, free from regulation. That a state statute deprives a person of a right which he formerly possessed, whether it be a right to go where he pleases, or sell what he pleases at prices fixed by himself, does not per se brand the statute as unconstitutional. The process of civilization has consisted largely of the gradual regulation of the individual in his liberty of action and ownership of property for the public good. As society has become more complex, the necessity for such regulation has become more acute.

"Neither the state nor the federal constitution guarantees any person absolute liberty of action. The liberty guaranteed by our law is a liberty subject to regulation in the public good —an equal liberty rather than an absolute liberty."

Several cases were then cited in support of this concept before the court continued; "Under its police power, the state, in a proper case has the power, acting in the interests of the general welfare, to regulate property and contract rights, and this includes, of course, the power to regulate the right of free bargaining. The fact that a state can lawfully pass a statute requiring free and open competition, such as the Cartwright Act, supra, which regulates the rights of a manufacturer or producer, and limits his freedom of contract, indicates this power exists."

Supporting cases were given and it was pointed out that the fact that a statute limits the rights of the owner or property, or limits the right of free bargaining in other ways, does not necessarily determine the validity of the enactment. Illustrations were cited of statutes, passed under police power, which interfere with the right of free bargaining which have been upheld on the theory the regulation is in the public interest. Furthermore, it was shown by decisions made by the U. S. Supreme Court that the police power is no longer limited to measures designed to protect life, safety, health and morals of the citizens, but extends to measures designed to promote the public convenience and the general prosperity.

The court then said: "The above cases conclusively establish that there is no absolute right of free bargaining guaranteed by the constitution. Since, under the proper circum-

stances, the right of free bargaining can be, and in the past has been regulated, it necessarily follows that, in a proper case, this power to regulate free bargaining includes the power to regulate price.——"

In answer to the contention by the defendant that the legislature has power to regulate prices only on those articles "affected with a public interest", the court again points out that the Fair Trade act in this state does not aim primarily at regulating prices, but at protecting the property and contract rights of the manufacturer, distributor, and retailer.

Moreover, the court indicated, the statute does not attempt to regulate the price of any one article, but here the legislation affects an entire class of articles. Another complete answer to the defendant's contention is believed to be that, if the purchase and sale of any one article or class of articles is subject to regulation under the police power, for reasons outlined above, then its purchase and sale does affect the public interest. Supporting citations were given on these points.

The court then considered it necessary to emphasize that the statute involved in this case is not solely a price fixing or regulating law. While it is true that it permits producers to fix the resale prices of their products by contracts with distributors or retailers, and under the amendment this was extended to include all retailers who have knowledge of the contracts, price regulation was not the main purpose of the statute, it said.

The statute was held to apply only to certain articles sold under a trade-name or brand of a producer and also held that the good-will built up in connection with these trade-marks, or brands, by advertising or other means is a species of property entitled to protection. Furthermore, when the retailer sells such an article to a customer, the article is not sold solely on the reputation of the retailer, but partially, at least, on the reputation built up by the owner of the trade-mark, it was brought out.

Moreover, section 1½ (1933 amendment) comes into operation only when the manufacturer or producer has entered into contracts fixing the resale price. The statute, it was pointed out, by preventing price-cutting, is aimed at protecting these valuable property and contract rights of the manufacturer — rights just as valuable and just as much entitled to protection as the right of the retailer, who is attempting, by exercising his claimed right of freedom of action, to injure the property and contract rights of the producer.

The court held that in so far as the Fair Trade act permits the producer to fix the resale price of his product by contract, the act merely embodies a rule of law well settled in California. Instances were then given in which it had been held that, as far as articles in intrastate commerce are concerned, without statutory authorization, the manufacturer, by contract with a retailer, may fix the resale price.

WHEN these concepts are applied to Sec. 1½ of the Fair Trade act, the court had no hesitancy in holding that the section is constitutional and that the object sought is clearly within the sphere of state regulation, and the means provided in the statute have a reasonable relation to this object. In its opinion the statute is neither arbitrary nor discriminatory.

The court made the point that California apparently is the first state to have passed a statute containing the provisions of Sec. 1½, which actually extends price regulation to resellers selling a branded product, whether or not they have entered into a written contract. New Jersey, in 1916, was declared to have passed a statute permitting the manufacturer to fix the resale price of a trade-marked article by fixing the resale price to the container in which the article was sold. This resale price was made binding on all retailers and upheld by the New Jersey courts on substantially the same reasoning as set forth in this opinion.

A full discussion was entered into by the California court to show whereby the California statute differs from the New York Fair Trade act, which was held unconstitutional in the case of the Doubleday, Doran & Co. Inc., v. R. W. Macy and Co., Inc. It was felt that, upon careful analysis of the facts in this case, the decision did not discuss the fundamental basis and purpose of the legislation represented in the California Act.

In answer to a contention by the defendant that the California Fair Trade act attempts to regulate interstate commerce, and therefore is unconstitutional, the court held that this was entirely without merit in that the complaint clearly established that the transactions before the court involve goods wholly located within the state. However, it was indicated, terms of the statute were sufficiently broad and could conceivably be interpreted to include interstate transactions.

In conclusion the decision said: "It is beyond denial that, under our form of government, the use of property and the making of contracts are normally matters of private concern. Here, no question of impairment of existing contracts is involved. No criminal proceedings have arisen ——. The plaintiffs are seeking, in a civil action, to restrain conduct on the part of the defendant which the legislature, in determining a question of economic policy, has declared to be 'unfair competition, and actionable at the suit of any person damaged thereby'.

"We are of the view that action, measured by the yardstick of the cases cited, and other authorities of similar import, must be held free from constitutional objections, and, not being shown to be unreasonable or arbitrary, it must be sustained as a proper legislative declaration of the policy of the state on the practice of price-cutting."

This opinion which ruled in favor of the plaintiffs was concurred in by four of the judges. Dissenting opinions were given separately by two other justices.

In the second case, which covered the complaint by Pyroil Sales Co., Inc., that The Pep Boys, Manny, Moe & Jack of California, were selling Pyroil, a branded and trade-marked article, at retail prices lower than those sought to be maintained by the plaintiff, the court's ruling was identical with that in the Factor case, and the defendants were enjoined.

New Guffey Bill Raises Threat Of Federal Fuel Oil Tax

By A. M. PETTY
N. P. N. Staff Writer

WASHINGTON, May 23

WHILE the Supreme Court's decision May 18 invalidating the Guffey Coal Law apparently has killed the chances of federal oil control, it has raised a new threat —attempts to saddle price-fixing and discriminatory taxes on the oil industry.

A new Guffey Coal Bill, virtually the same as the outlawed statute except for deletion of the labor provisions, has been introduced in Congress. It retains the price-fixing machinery and marketing code of the old law.

But the coal people are not going to be satisfied with fixing coal prices—they also want to boost fuel oil prices so as to "equalize competition" between oil and coal.

If the Supreme Court had upheld the Guffey Law, the coal people would have gone ahead with their plans to jam through the same sort of law for oil. Now, with another Guffey Bill introduced, they may try to tack on an amendment to fix oil prices also.

Another plank in the coal industry's program to check the increasing use of oil for heating is to tax fuel oil. Congressman Boland, Scranton, Pa., was given a "hearing" this week on his bill (HR-12161) to tax fuel oil one cent a gallon.

In the Guffey decision, three members of the Supreme Court —Justices Cardoza, Stone and Brandies—held that the federal government can not only fix prices in interstate commerce but even local prices where they "directly and intimately" affect interstate commerce.

Chief Justice Hughes held federal powers extended to fixing prices for interstate sales but he was silent on fixing local prices because of their effect on interstate commerce.

The other five justices, supporting the majority opinion, did not find it necessary to rule on price-fixing, as such, although warning that their silence was not to be taken as indicating that they would uphold price-fixing when it comes before them.

The views of the minority upholding price-fixing is the nearest approach to support for its industrial-control plans that the New Deal has yet obtained from the Supreme Court. And the Administration probably will make the most of it.

THE new Guffey Bill retains the tax with a drawback to producers accepting the marketing code (which the Court condemned as a "penalty" and not a tax) and also price-fixing and marketing control.

Plans are being made to bring the Guffey Bill to the floor of the House without a hearing. With Administration support, it may get by the House. In the Senate, however, Chairman Wheeler of the interstate commerce committee, which will consider the bill, says he doesn't see how it can be acted upon this session.

Some of the Administration's political advisers feel that there is dynamite in passing a price-fixing law to raise coal prices on the eve of a national election. For the same reason, some advisers are said to oppose the proposed fuel oil tax.

The plan, for this session, may be to go through the motions of trying to pass a new coal law. Without labor provisions to alleviate the odium of price-fixing, Senator Borah and other "friends of the consumer" will have a field day attacking the bill if and when it reaches the Senate floor.

If the Administration stalls on the Guffey Bill at this session, however, it will be only marking time until Congress meets again in January. The President seems convinced that the government has got to take the coal industry under its wing —to keep the mines running and labor unions quiet.

To offset shrinking tonnage, due to coal being displaced as a fuel because of the convenience, cleanliness and other advantages of oil and gas, the Administration intends to try fixing minimum prices for coal.

But the coal people are shrewd enough to see that fixing coal prices will only increase competition from oil and gas—unless steps are taken to "equalize" this competition.

To accomplish this, the coal industry would like to have prices also fixed for oil and gas. To that end they may try to amend the Guffey Bill, either at this session or next, to control oil prices. Prices of natural gas could be controlled under the Lea Bill to regulate interstate transportation of natural gas, now pending in the House.

As another string to their bow, the coal people have the Boland Bill to tax all fuel oil at the rate of one cent a gallon which he says would bring $158,000,000 a year in taxes. The Scranton congressman has also talked of levying a tax on natural gas.

For the same reason, the National Coal Association is fighting for passage of the Disney Bill (HR-10483) which would double the excise taxes on imported crude oil and fuel oil, making the rate 42c a barrel.

Hearings on the Disney Bill before the Ways and Means Committee were concluded this week with representatives of asphalt-users vigorously attacking the propsed new excise tax of $2 a ton on imported asphalt. Besides increasing the oil import excise taxes, the Disney measure, sponsored by the Independent Petroleum Association of America would also restrict oil imports to 4.5 per cent of the total domestic demand as determined by the Bureau of Mines.

Major Companies Continue Low Price Policy in Government Bids

WASHINGTON, May 23

ANALYSIS of bids to supply federal gasoline requirements during the six months beginning July 1 in 23 cities in the South and East indicates that the Treasury Procurement Division will be able to obtain lower prices in 14 cities and the same or lower prices in five other cities than contracts now running. In four cities, prices probably will be higher.

These cities are the ones in Regions 1 and 2 which several months ago were lifted out of their respective "zones" and bids asked separately for supplying federal requirements within their city limits.

Bids were asked on a three, six and 12-month basis. Standard Oil Co. of New Jersey and its subsidiaries generally bid only on the six-month period. Generally, the bidders quoted slightly higher prices for the 12-month period and sometimes for the six-month period, than on a three-month basis.

For cities in Region One, the bid for tank wagon delivery was generally commercial consumer tank car price (although occasionally a bidder would quote less or more than tank car price) with maximum prices which were frequently below the present tank car price.

In Region Two, where the price was based on tank car, the bids generally added a 0.5-cent differential, although some quoted less. In other Region 2 cities, the price basis was generally 2.5 or 3 cents off commercial consumer tank wagon.

Following is a comparison between maximum prices for tank wagon delivery in the April-June contracts now in force and the maximum price bid for the period beginning July 1 which appears to be low:

City	Apr.-July Contract Price	Beg. July 1 Apparent Low Max Price Bid
V-65 Grade		
New York	7.7	7.34 (No. 148)
Baltimore	7.15	7.04
Newark	7.3	7.3
Boston	6.97	7.2 (No. 67)
Worcester	7.5	7.72
Brooklyn	7.7	7.35
Flushing, N. Y.	7.7	7.48
Jamaica, N. Y.	7.7	7.48
Bridgeport	7.8	7.66
New Haven	8.0	7.9
Jersey City	7.3	7.3
Buffalo	7.89	7.75
Rochester	8.25	8.0
Pittsburgh	8.25	8.5
Philadelphia	7.7	7.25 (No. 206)
Providence	7.25	7.24
Richmond, Va.	8.0	7.89
Norfolk, Va.	7.5	7.39
Memphis, Tenn.	7.95	8.6
G-101 Grade		
Atlanta, Ga.	8.0	8.0
Birmingham	8.47	*7.0
Jacksonville, Fla	6.8	6.8
Miami, Fla.	8.3	8.3

*Three months only; 6 months, 7.5 cents.

Except for Atlanta, Birmingham, Jacksonville and Miami, where prices are for G-101 (third grade) gasoline, the prices for all cities are for V-65 (regular) gasoline.

Summarized below are bids received for 23 cities in Regions 1 and 2, each city constituting a "zone" in itself. The gallonage figure appearing after each city's name is the estimated total requirement for *three* months, as determined by the Treasury Procurement Division. All items are for tank wagon delivery unless otherwise stated.

REGION ONE-CITY BIDS

BRIDGEPORT, CONN., 10,000 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and twelve months, respectively, unless otherwise stated. Socony-Vacuum, 8 cents, 8 cents, 8 cents; Texas 7.66 cents, 7.66 cents, no bid on 12 months. Richfield, 9 cents, 9 cents (posted commercial consumer tank car plus 0.5 cents) no bid on 12 months; Colonial Beacon, (posted commercial consumer tank car plus 0.5 cents) 7.79 cents for six months, no bid on three or 12 months; McElligott, 8.25 cents, 8.25 cents (posted commercial consumer tank car plus 0.75 cents) no bid on 12 months; Tide Water, 8.25 cents, no bid on six or 12 months; Atlantic, 8.5 cents, 8.5 cents (posted commercial consumer tank car plus 0.5 cents) no bid on 12 months; Sinclair, 8.5 cents, 8.5 cents (commercial consumer tank car plus 0.5 cents) no bid on 12 months; Gulf, 8.5 cents, 9 cents, 9.5 cents (posted commercial consumer tank car price plus 0.5 cents); American, 9 cents, (posted commercial consumer tank car plus 0.5 cents) no bid on 6 or 12 months.

NEW HAVEN, 11,000 gallons V-65

Bids are posted commercial consumer tank car price, unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 8 cents, 8 cents, 8 cents Texas, 7.9 cents, 7.9 cents, no bid on 12 months; Richfield, 9 cents, 9 cents (posted commercial consumer tank car plus 0.5 cents), no bid on 12 months; Colonial Beacon, 7.94 cents for six months, no bid on three or 12 months; Shell, 8.25 cents, 8.25 cents, no bid on 12 months; Epco, 9 cents, 9 cents (posted commercial consumer tank car price, less Federal tax), no bid on 12 months; McElligott, 8.25 cents, 8.25 cents (posted commercial consumer tank car plus 0.5 cents), no bid on 12 months; Tide Water, 8.25 cents, no bid on six or 12 months; Atlantic, 8.5 cents, 8.5 cents (posted commercial consumer tank car plus 0.5 cents), no bid on 12 months; Sinclair, 8.5 cents, 8.5 cents (commercial consumer tank car plus 0.5 cents), no bid on 12 months; Gulf, 8.5 cents, 9 cents, 9.5 cents (posted commercial consumer tank car plus 0.5 cent); American, 9 cents for three months only (posted commercial consumer tank car plus 0.5 cents.

BALTIMORE, 50,000 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Standard of New Jersey, U. S. Motor 65/66 octane, 7.05 cents six months only (posted commercial consumer tank car plus 0.5 cents; Continental, 8.5 cents three months only; Texas, 7.04 cents, 7.04 cents, no bid for 12 months; Shell, 7.75 cents, 7.75 cents, no bid on 12 months; Tide Water, 7.75 cents, three months only; Atlantic, 7.75 cents, 7.75 cents (posted

commercial consumer tank car plus 0.25 cent); no bid on 12 months; Sinclair, 8 cents, 8 cents, (posted commercial consumer tank car plus 0.5 cents) no bid on 12 months; Gulf, 8 cents, 8.5 cents, 9 cents (posted commercial consumer tank car plus 0.5 cents); American, 7.45 cents, 7.65 cents, 8 cents (posted commercial consumer tank car plus 0.49 cents).

WORCESTER, MASS., 9,000 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 7.75 cents, 7.75 cents, 7.75 cents; Texaco, 7.72 cents, 7.72 cents, no bid on 12 months; Richfield, 8.75 cents, 8.75 cents (posted commercial consumer tank car plus 0.5 cents); Colonial Beacon, 7.75 cents, no bid on three or 12 months (posted commercial consumer tank car plus 0.5 cents); Shell, 8 cents, 8 cents, no bid on 12 months; Pennsylvania Oil Co., 7.75 cents, only bid on three months (posted commercial consumer tank car plus 0.5 cents); Tide Water, 8 cents, bid only on three months; Atlantic, 8.25 cents, 8.25 cents (posted commercial consumer tank car plus 0.5 cents) no bid on 12 months; Sinclair, 8.25 cents, 8.25 cents (posted commercial consumer tank car plus 0.5 cents) no bid on 12 months; Gulf, 8.37 cents, 8.87 cents, 9.37 cents (posted commercial consumer tank car plus 0.5 cents); American, 8.75 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on six or 12 months.

BOSTON (67), 130,900 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 7.34 cents, 7.34 cents, 7.34 cents; Texaco, 7.5 cents, 7.5 cents, did not bid on 12 months; Richfield, 8.5 cents, 8.5 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Colonial Beacon, U.S.M. 65/66 octane 7.2 cents, Essolene, 7.45 cents on six months, did not bid on three or 12 months (posted commercial consumer tank car plus 0.5 cents); Shell, 7.75 cents, 7.75 cents, did not bid on 12 months; Pennsylvania Oil Co., 7.4 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on six or 12 months; Tide Water, 7.75 cents, did not bid on six or 12 months; Atlantic, 8.1 cents, 8.1 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Cities Service Refining, 7.5 cents, did not bid on six or 12 months; American, 8.5 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on six or 12 months; Quincy, 8 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 6 or 12 months; Sinclair 8 cents, 8 cents, no bid on 12 months.

BOSTON (68), 900 gallons V-65

All Federal activities except Post Office Garage, 176 Ipswich St.

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 7.5 cents, 7.5 cents, 7.5 cents; Texas, 7.75 cents, 7.75 cents (posted commercial consumer tank car plus 0.25 cents) did not bid on 12 months; Colonial Beacon, 7.45 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on three or 12 months; Shell, 7.75 cents, 7.75 cents, did not bid on 12 months; Pennsylvania Oil, 7.4 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on six or 12 months; Quincy Oil, 8 cents (posted commercial consumer tank car plus 1 cent) did not bid on six or 12 months; Tide Water, 7.75 cents, did not bid on six or 12 months; Atlantic, 8.1 cents, 8.1 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Sinclair, 8 cents, 8 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; American, 8.5 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on six or 12 months.

BOSTON (69), 130,000 gallons

Deliveries into Government owned tank trucks from contractor's storage tank.

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 6.96 cents, 6.96 cents, 6.96 cents; Texaco, 7.1 cents, 7.1 cents, did not bid on 12 months; Colonial Beacon, 7 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on three or 12 months; Shell, 7.75 cents, 7.75 cents (posted commercial consumer tank car plus 0.25 cents) did not bid on 12 months; Pennsylvania Oil, 6.94 cents (posted commercial consumer tank car less 0.25 cents) did not bid on six or 12 months; Quincy Oil, 7.5 cents, did not bid on six or 12 months; Tide Water, 7.75 cents (posted commercial consumer tank car minus 0.25 cents) did not bid on six or 12 months; American, 8.5 cents, did not bid on six or 12 months.

BOSTON (70), 130,000 gallons

For tank car delivery directly to tank truck.

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. No bidders, several stating it was illegal to unload in this manner, being contrary to regulations of the Interstate Commerce Commission.

BOSTON (71)

Tank car shipment, F.O.B. bidder's bulk plant.

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 6.96 cents, 6.96 cents, 6.96 cents; Colonial Beacon, 6.65 cents, did not bid on three or 12 months; Shell, 6.92 cents, 7.7 cents, did not bid on 12 months; Tide Water, 7.75 cents, did not bid on six or 12 months; Atlantic, 7.5 cents, 7.5 cents, did not bid on 12 months.

JERSEY CITY, N. J., 22,000 V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 7.8 cents, 7.8 cents, 7.8 cents; Standard of N. J., 7.8 cents, did not bid on three or 12 months (posted commercial consumer tank car plus 0.5 cents); Continental, 8.8 cents, did not bid on 6 or 12 months; Texaco, 7.3 cents, 7.3 cents, did not bid on 12 months; Richfield, 7.4 cents, 7.4 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Warner-Quinlan, 7.53 cents, 7.53 cents, 7.78 cents, (posted commercial consumer tank car for the Newark area, less 0.27 cents for three and six months and less 0.02 cents for 12 months); Shell, 8.05 cents, 8.05 cents, did not bid on 12 months; D & L Oil, 7.49 cents, 7.49 cents (posted commercial consumer tank car plus 0.25 cents) did not bid on 12 months; Tide Water, 8.05 cents, did not bid on six or 12 months; Atlantic, 8.3 cents, 8.3 cents, (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Sinclair, 8.3 cents, 8.3 cents, (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Gulf, 8.3 cents, 8.8 cents, 9.3 cents (posted commercial consumer tank car plus 0.5 cents); American, 8.8 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on six or 12 months.

NEWARK, 30,000 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's names are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 7.8 cents, 7.8 cents, 7.8 cents; Standard of New Jersey, 7.8 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on three or 12 months; Continental, 8.8 cents, did not bid on six or 12 months; Texaco, 7.3 cents, 7.3 cents, did not bid on 12 months. Richfield, 7.4 cents, 7.4 cents, (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Warner-Quinlan, 7.53 cents, 7.53 cents, 7.78 cents, (posted commercial consumer tank car for the Newark area, less 0.27 cents for three and six months and less 0.02 cents for 12 months); Shell, 8.05 cents, 8.05 cents, did not bid on 12 months; D & L Oil, 7.49 cents, 7.49 cents (posted commercial consumer tank car plus 0.25 cents) did not bid on 12 months; Tide Water, 8.05 cents, did not bid on six or 12 months; Atlantic, 8.3 cents, 8.3 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Sinclair, 8.3 cents, 8.3 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Gulf, 8.3 cents, 8.3 cents, 9.3 cents (posted commercial consumer tank car plus 0.5 cents); American, 8.8 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 6 or 12 months.

BUFFALO, 35,500 gallons V-65

Bids are posted commercial con-

sumer tank car price unless otherwise stated. Prices after bidder's name are for three months, six months and 12 months, respectively, unless otherwise stated. Socony-Vacuum, 7.75 cents, 7.75 cents, 7.75 cents; Texas, 8 cents, 8 cents, did not bid on 12 months; Richfield, 8.2 cents, 8.2 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Colonial Beacon, 8 cents, (posted commercial consumer tank car plus 0.5 cents) did not bid on three or 12 months; Shell, 8.5 cents, 8.5 cents, did not bid on 12 months; Tide Water, 8.5 cents, did not bid on 12 months; Atlantic, 8.75 cents, 8.75 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on six or 12 months; Sinclair, 8.75 cents, 8.75 cents (posted commercial consumer tank car plus 0.5 cents) did not bid on 12 months; Gulf, 8.5 cents, 9 cents, 9.5 cents (posted commercial consumer tank car plus 0.5 cents).

ROCHESTER, 18,000 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for 3, 6 and 12 months respectively, unless otherwise stated.

Socony-Vacuum, 8 cents, 8 cents, 8 cents; Texas, 8 cents, 8 cents, no bid on 12 months; Richfield, 8.2 cents, 8.2 cents, no bid on 12 months; Colonial Beacon, 8 cents on 3 months only; Shell, 8.5 cents, 8.5 cents, no bid on 12 months; Webaco Oil Co., 8.5 cents, 8.5 cents, 9 cents; Tide Water, 8.5 cents, 3 months only; Atlantic 8.75 cents, 8.75 cents, no bid on 12 months; Sinclair, 8.75 cents, 8.75 cents, no bid on 12 months; Gulf, 7.5 cents, 9 cents, 9.5 cents.

NEW YORK (148) 300,000 gallons V-65

Bids are posted commercial consumer tank car price, unless otherwise stated. Prices after bidder's name for 3 months, 6 months and 12 months, respectively, unless otherwise stated:

Socony-Vacuum, 7.34 cents, 7.34 cents, 7.34 cents; Texaco, 7.35 cents, 7.35 cents, did not bid on 12 months; Richfield, 7.62 cents, 7.62 cents (posted commercial consumer tank car plus 0.25 cents), did not bid on 12 months; Colonial Beacon, 7.64 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 3 and 12 months; Warner-Quinlan, 7.48 cents, 7.48 cents, 7.73 cents (posted commercial consumer tank car less 0.27 cent for 3 and 6 months and less 0.2 cent for 12 months); Shell, 8 cents, 8 cents, did not bid on 12 months; First National, 8.2 cents, 8.2 cents (posted commercial consumer tank car plus 0.7 cent), did not bid on 12 months; Tide Water, 8 cents, did not bid on six or 12 months; Sinclair, 8.25 cents, 8.25 cents, no bid on 12 months; Gulf, 8.25 cents, 8.75 cents, 9.25 cents (posted commercial consumer tank car plus 0.5 cent); American, 8.75 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 6 or 12 months.

(No. 149) NEW YORK (except W. 34th St. P. O. garage) 10,000 gallons V-65

Bids are posted commercial consumer tank car price, unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively, unless otherwise stated:

Texaco, 7.6 cents, 7.6 cents, did not bid on 12 months; Richfield, 7.62 cents, 7.62 cents, (posted commercial consumer tank car plus 0.25), did not bid on 12 months; Colonial Beacon, 7.94 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 3 or 12 months; Shell, 8 cents, 8 cents, did not bid on 12 months; First National 8.2 cents, 8.2 cents (posted commercial consumer tank car plus 0.7 cent), did not bid on 12 months; Tide Water, 8 cents, did not bid on 6 or 12 months; Sinclair, 8.25 cents, 8.25 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 12 months; Gulf, 8.25 cents, 8.75 cents, 9.25 cents (posted commercial consumer tank car plus 0.5 cent); American 8.75 cents (posted commercial tank car plus 0.5 cent), did not bid on 6 and 12 months.

NEW YORK (150) 230,000 gallons V-65 into Government owned tank trucks at contractor's storage tank)

Bids are posted commercial consumer tank car price,, unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively, unless otherwise stated:

Socony-Vacuum, 7.25 cents, 7.25 cents, 7.25 cents; Texas, 7.2 cents, 7.2 cents, did not bid on 12 months; Richfield, 7.47 cents, 7.47 cents, did not bid on 12 months; Colonial Beacon, 7.49 (posted commercial consumer tank car plus 0.5 cent), did not bid on 12 months; First National, 8.2 cents, 8.2 cents (posted commercial consumer tank car less 0.1 cent), did not bid on 12 months; Shell, 8 cents, 8 cents (posted commercial consumer tank car plus 0.25 cent), did not bid on 3 or 12 months; National, 7.7 cents, 7.7 cents (posted commercial consumer tank car less 0.25 cent), did not bid on 6 or 12 months; American, 8.75 cents, did not bid on 6 and 12 months; Tide Water, 7.75 cents.

NEW YORK (151) 60,000 gallons V-65 for P. O. Garage, Park Avenue, Deliveries into Government owned tank trucks at contractor's storage tanks.

SAME as item No. 150.

NEW YORK (152) 290,000 gallons V-65 for T. C. delivery in the city, prices quoted F.O.B. railroad siding in N. Y. C.

Gulf the only bidder, as follows: 8.25 cents for three months; 8.29 cents for six months, and 9.29 cents for 12 months.

NEW YORK CITY (153) 290,000 gallons for T. C. shipment to N. Y. C. Prices to be bid F. O. B. bidder's bulk plant

Bids are posted commercial consumer tank car prices, unless otherwise stated. Prices after bidder's name are for 3 months, six months and 12 months, respectively, unless otherwise stated:

Socony-Vacuum, 7.25 cents, 7.25 cents, 7.25 cents; Richfield, 7.47 cents, 7.47 cents, did not bid on 12 months; Colonial Beacon, 6.6 cents, did not bid on 3 and 12 months; Warner-Quinlan, 6.875 cents, 6.875 cents, 7.125 cents; Shell, 6.7 cents, 6.95 cents, did not bid on 12 months; Tide Water, 7.75 cents, did not bid on 6 or 12 months; Gulf, 7.5 cents, 8 cents, 8.5 cents.

BROOKLYN 108-645 gallons V-65

Bids are posted commercial consumer tank car price, unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively, unless otherwise stated:

Socony-Vacuum, 7.45 cents, 7.45 cents, 7.45 cents; Texaco, 7.35 cents, 7.35 cents, did not bid on 12 months; Richfield, 7.62 cents, 7.62 cents (posted tank car commercial consumer plus 0.25 cent), did not bid on 12 months; Colonial Beacon, 7.64 (posted commercial consumer tank car plus 0.5 cent), did not bid on 3 and 12 months; Warner-Quinlan, 7.48 cents, 7.48 cents, 7.73 cents (posted commercial tank car for the New York area less 0.27 cent for 3 and 6 months and less 0.02 cent for 12 months); Shell, 8 cents, 8 cents, did not bid on 12 months; First National Oil, 8.2 cents, 8.2 cents (posted commercial consumer tank car plus 0.7 cent), did not bid on 12 months; Tide Water, 8 cents, did not bid on 6 and 12 months; Sinclair, 8.25 cents, 8.25 cents (posted tank car commercial consumer plus 0.5 cent), did not bid on 12 months; Gulf, 8.25 cents, 8.75 cents, 9.25 cents (posted tank car commercial consumer plus 0.5 cent); American, 8.75 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 6 and 12 months.

FLUSHING (158) 15,000 gallons V-65 and JAMAICA (159) 8000 gallons V-65

SAME AS ITEM 157 above, EXCEPT, Socony-Vacuum bid 7.5 cents, 7.5 cents, 7.5 cents on both No. 158 and 159. The Texas Company bid 7.6 cents, 7.6 cents, and did not bid on 12 months on both Nos. 158 and 159. Tide Water bid 8 cents on No. 158 but bid 7.75 cents on No. 159. Gulf bid same on No. 158 as it did no No. 157 but did not bid at all on No. 159. All others identical on all three numbers, 157, 158 and 159.

PITTSBURGH (178) 45,000 gallons V-65

Bids are posted commercial consumer tank car price, unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively, unless otherwise stated:

S. O. of Pa., 8.5 cents, did not bid on 3 or 12 months; Socony-Vacuum, 8.5 cents, 8.5 cents, 8.5 cents; Texas, 9 cents, 9 cents (posted tank car commercial consumer plus 0.5 cent), did not bid on 12 months; Atlantic Refining, 8.5 cents, 8.5 cents, did not bid on 12 months; Gulf, 9 cents, 9.5 cents, 10 cents (posted commercial consumer tank car plus 0.5 cent); American, 8.75 cents, 8.85 cents, 8.99 cents (posted commercial consumer tank car plus 0.49 cent).

PHILADELPHIA (206) 203,290 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively, unless otherwise stated:

S. O. of Pa., 7.39 cents, did not bid on 3 or 12 months; Socony-Vacuum, 7.5 cents, 7.5 cents, 7.5 cents; Texas, 7.46 cents, 7.46 cents, did not bid on

12 months; Richfield, 7.62 cents, 7.62 cents (posted tank car commercial consumer plus 0.25 cent), did not bid on 12 months; Shell, 7.75 cents, 7.75 cents, did not bid on 12 months; Tide Water, 7.75 cents, did not bid on 6 or 12 months; Atlantic, 7.5 cents, 7.5 cents, did not bid on 12 months; Sinclair, 8 cents, 8 cents (posted tank car commercial consumer plus 0.5 cent), did not bid on 12 months; Gulf, 8 cents, 8.5 cents, 9 cents, (posted commercial consumer tank car plus 0.5 cent); American, 7.25 cents, 7.75 cents, 8 cents (posted commercial consumer tank car plus 0.49 cent).

PHILADELPHIA (207) 150,000 gallons V-65 for all federal activities in Phila. except North Philadelphia Post Office Garage

SAME AS 206.

NORTH PHILADELPHIA (208) 75,000 V-65 Post Office Garage. Deliveries into Government owned tank trucks at contractor's storage tanks

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively unless otherwise stated.

S. O. of Pa., 7.25 cents, did not bid on 3 or 12 months; Socony-Vacuum, 7.25 cents, 7.25 cents, 7.25 cents; Texas, 7.25 cents, 7.25 cents, did not bid on 12 months; Richfield, 7.47 cents, 7.47 cents, did not bid on 12 months; Shell, 7.75 cents, 7.75 cents, did not bid on 12 months; Tide Water, 7.5 cents, did not bid on 6 or 12 months; American, 7 cents, 7.75 cents, 7.95 cents (posted commercial consumer tank car plus 0.25 cent).

WEST PHILADELPHIA (209) 75,000 gallons V-65 Post Office Garage Deliveries same as No. 208

All bids exactly same as in No. 208.

PHILADELPHIA (210) 150,000 gallons V-65 Tank Car Delivery F.O.B. RR siding within city

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively, unless otherwise stated.

S. O. of Pa., 6.8 cents, did not bid on 3 or 12 months; Socony-Vacuum, 7.1 cents, 7.1 cents, 7.1 cents; Richfield, 7.1 cents, 7.1 cents (posted commercial consumer tank car plus 12/100 cent), did not bid on 12 months; Shell, 7.028 cents, 7.028 cents, did not bid on 12 months; Tide Water, 7.75 cents, did not bid on 6 or 12 months; Atlantic, 6.85 cents, 6.85 cents (add freight), did not bid on 12 months; Gulf, 7.5 cents, 8 cents, 8.5 cents (posted commercial consumer tank car plus 0.5 cent).

PHILADELPHIA (211) 150,000 gallons V-65 Tank Car shipment F.O.B. bidder's bulk plant

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months unless otherwise stated:

S. O. of Pa., 6.7 cents, did not bid on 6 or 12 months; Richfield, 7 cents, 7 cents, did not bid on 12 months; Shell, 8 cents, 7.15 cents, did not bid on 12 months; Tide Water, 7.75 cents, did not bid on 6 or 12 months; Gulf, 7.5 cents, 8 cents, 8.5 cents (posted tank car plus 0.5 cent).

PROVIDENCE, R. I., 11,500 gallons V-65

Bids are posted commercial consumer tank car price unless otherwise stated. Prices after bidder's name are for 3 months, 6 months and 12 months, respectively, unless otherwise stated:

Socony-Vacuum, 7.5 cents, 7.5 cents, 7.5 cents; Texas, 7.24 cents, 7.24 cents, did not bid on 12 months; Richfield, 7.47 cents, 7.47 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 12 months; Colonial Beacon, 7.5 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 3 or 12 months: Tide Water, 7.75, did not bid on 6 or 12 months; Atlantic, 8 cents, 8 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 12 months; Gulf, 8 cents, 8.5 cents, 9 cents (posted commercial consumer tank car plus 0.5 cent); American, 8.5 cents (posted commercial consumer tank car plus 0.5 cent), did not bid on 6 or 12 months.

REGION TWO—CITY BIDS

BIRMINGHAM, ALA., 12,000 gallons G-101

Bids are posted tank wagon commercial consumer, less 2.5 cents, unless otherwise stated. Prices after bidder's names are for three, six and 12-month periods, respectively, unless otherwise stated. Gulf, 7 cents, 7.5 cents, 8 cents; Shell, 9 cents, no bid on six or twelve months; Sinclair, 8.5 cents, 8.5 cents, no bid on twelve months; Standard of Ky., 8 cents, 8 cents, no bid on 12 months; Texaco, 8.47 cents, 8.47 cents, no bid on 12 months.

JACKSONVILLE, FLA., 12,000 gallons G-101

Bids are posted tank wagon commercial consumer, less 3 cents, unless otherwise stated. Prices after bidders names are for three, six and 12 months, respectively, unless otherwise stated. Orange State, 6.8 cents, 6.8 cents, 7.8 cents; Sinclair, 7.5 cents, 7.5 cents (posted tank wagon commercial consumer less 3.125 cents) no bid on 12 months; Standard of Ky., 6.87 cents, 7.37 cents, no bid on 12 months; Texas, 7.3 cents, 7.3 cents (posted tank wagon commercial consumer less 2.5 cents), no bid on 12 months.

MIAMI, FLA., 12,000 gallons G-101

Bids are posted tank wagon commercial consumer, less 3 cents, unless otherwise stated. Prices after bidders names are for three, six and 12 months, respectively, unless otherwise stated. Orange State, 8.3 cents, 8.3 cents, 8.8 cents; Sinclair, 8.5 cents, 8.5 cents (posted tank wagon commercial consumer less 3.125 cents) no bid on 12 months; Standard of Ky., 8.37 cents, 8.87 cents, no bid on 12 months.

ATLANTA, GA., 10,000 gallons G-101

Bids are posted commercial consumer tank wagon less 2.5 cents. Prices after bidder's names are for three, six and 12 months, respectively unless otherwise stated. Shell, 9 cents, no bid on six or 12 months; Sinclair, 10 cents, 10 cents, no bid on 12 months; Wofford, 8 cents, 9 cents, no bid on 12 months; Standard of Ky., 8 cents, 8.5 cents, no bid on 12 months; Texas, 8 cents, 8 cents, no bid on 12 months.

MEMPHIS, TENN., 10,000 gallons V-65

Bids are posted tank car commercial consumer, plus 0.5 cents, unless otherwise stated. Prices after bidder's names are for three, six and 12 months respectively, unless otherwise stated. Gulf, 9 cents, 9.5 cents, 10 cents; Shell, 9 cents, no bid on six or 12 months; Pan American, 9.4 cents, 9 cents, no bid on 12 months; Texas, 8.6 cents, 8.6 cents (posted commercial consumer tank car plus 0.25 cents), no bid on 12 months; Sinclair, 9 cents, 9 cents, no bid on 12 months.

RICHMOND, VA., 13,500 gallons V-65

Bids are posted tank car commercial consumer, plus 0.5 cents, unless otherwise stated. Prices after bidder's names are for three, six and 12 months respectively, unless otherwise stated. Gulf, 8.5 cents, 9 cents, 9.5 cents; Standard of N. J., 7.89 cents, no bid on three or 12 months; Continental, 8.5 cents (posted commercial consumer tank car), no bid on six or 12 months; Sinclair 8.5 cents, 8.5 cents, no bid on 12 months; Standard of La., 8.34 cents, no bid on three or 12 months; James River Oil, 7.9 cents (posted commercial consumer tank car plus 0.1 cent) no bid on six or 12 months; Texas, 7.9 cents, 7.9 cents (posted commercial consumer tank car plus 0.1 cent) months; American, 7.99 cents, 8.25 cents, 8.49 cents (posted commercial consumer tank car plus 0.49 cents).

NORFOLK, VA., 15,000 gallons V-65

Bids are posted tank car commercial consumer, plus 0.5 cents, unless otherwise stated. Prices after bidder's names are for three, six and 12 months respectively, unless otherwise stated. Gulf, 8 cents, 8.5 cents, 9 cents; Standard of N. J., 7.39 cents, no bid on three or 12 months; Continental, 8 cents (posted commercial consumer tank car) no bid on six or 12 months; Sinclair, 8.5 cents, 8.5 cents, no bid on 12 months; Colonial Oil, 10 cents, no bid on six or 12 months; Texas, 7.5 cents, 7.5 cents (posted commercial consumer tank car) no bid on 12 months; American, 7.49 cents, 7.75 cents, 7.89 cents (posted commercial consumer tank car plus 0.49 cents).

Find New Gas Source

LOS ANGELES, May 21.—A possible new source of natural gas production was indicated the past week when Standard of California's test on McDonald Island, 12 miles from Stockton, Calif. showed a gas horizon in addition to one discovered on April 18. The April test at 4250 feet resulted in production of 8,250,000 cubic feet of gas per day.

When deepened to 5224 feet, a production of 8,500,000 cubic feet was developed and the gas from the lower level was found to be considerably higher in B.t.u. content than that from the upper sand. Preparations are now being made for a further test.

New Edeleanu Experimental Laboratory Starts Intensive Research Program

By ARCH L. FOSTER
N. P. N. Staff Writer

NEW YORK, April 30

PRACTICAL completion of the new research and experimental laboratory of the Edeleanu Co. Ltd., at Long Island City marks the first major step in that company's greatly expanded research program, started last year under the direction of Dr. E. N. Terres, research director of the company. This laboratory, occupying two floors of a large building, is nearly completed, and is designed to enable the staff to cover every phase of experimentation in the field of solvent treatment of all types of petroleum fractions.

The laboratory is built around a large, laboratory-scale pilot and demonstration plant equipped for treating studies at temperatures of minus 60 F. to 200 F. It includes a tower for counter-current extraction, evaporators for recovering solvents continuously from extract and raffinate fractions, a continuous caustic treating system for neutralizing both fractions from low-boiling products; a two stage ammonia refrigeration plant designed to produce temperatures in the coolant of lower than minus 70 F.; a brine circulatory system, and a large number of auxiliary units for smaller scale studies and corollary experimental work.

The units are almost entirely automatic, the main unit being easily operable by one man. Level controls are used to regulate and hold the interphase level in the extraction system, and to insure the continuous return of recovered solvent to the solvent feed tanks. Extraction temperatures and pressures in the system are automatically controlled, as well as the refrigeration system throughout. The brine pump is driven by an electric motor through a continuously variable speed reduction system, and the operator can govern the rate of circulation

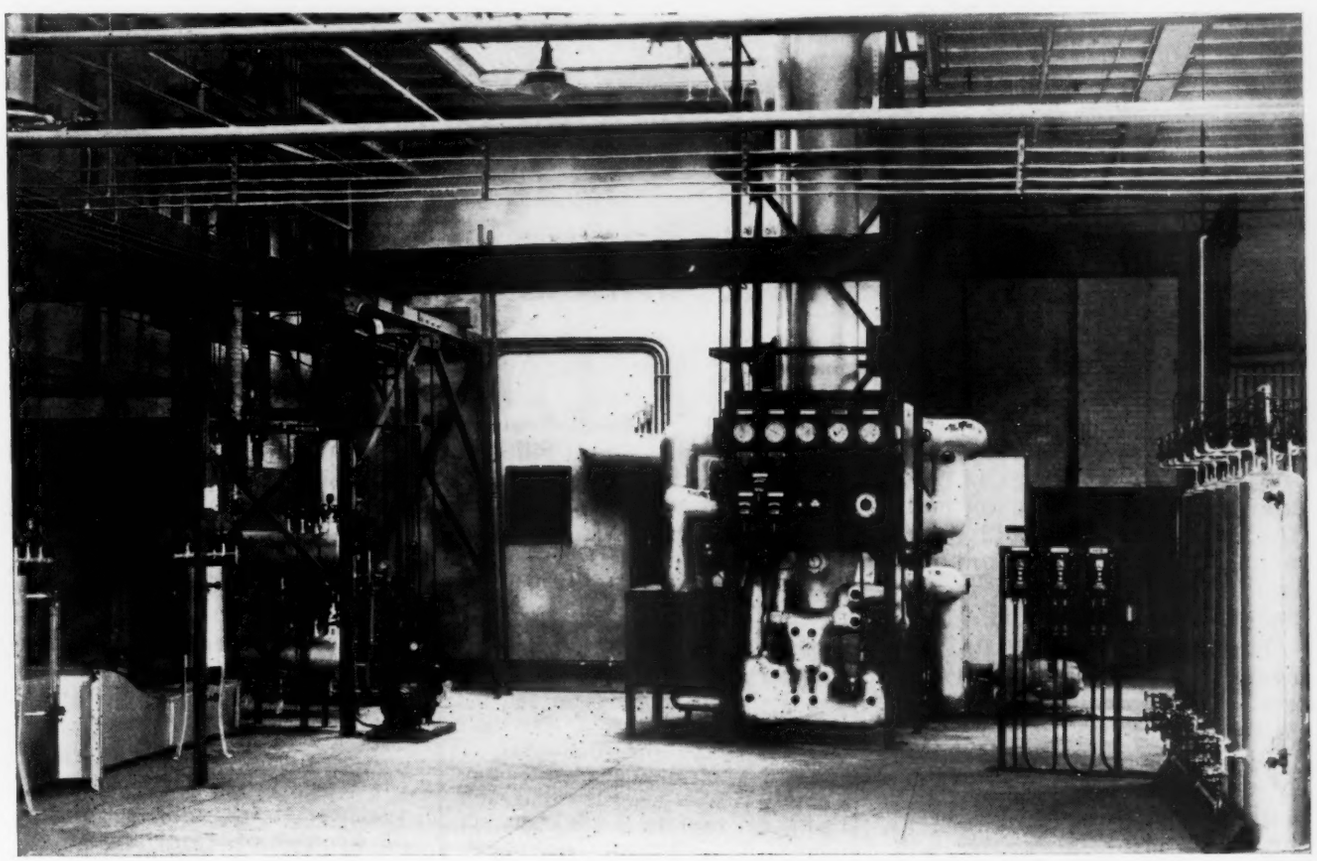


Fig. 2. The main refrigerating unit, with its control board and heavily insulated lines, is shown in the center background; at the right is the extraction battery shown in Fig. 3, and at the left are reservoirs, pumps and lines, and solvent recovery stills. Raw petroleum fractions for treatment are stored underground in this laboratory

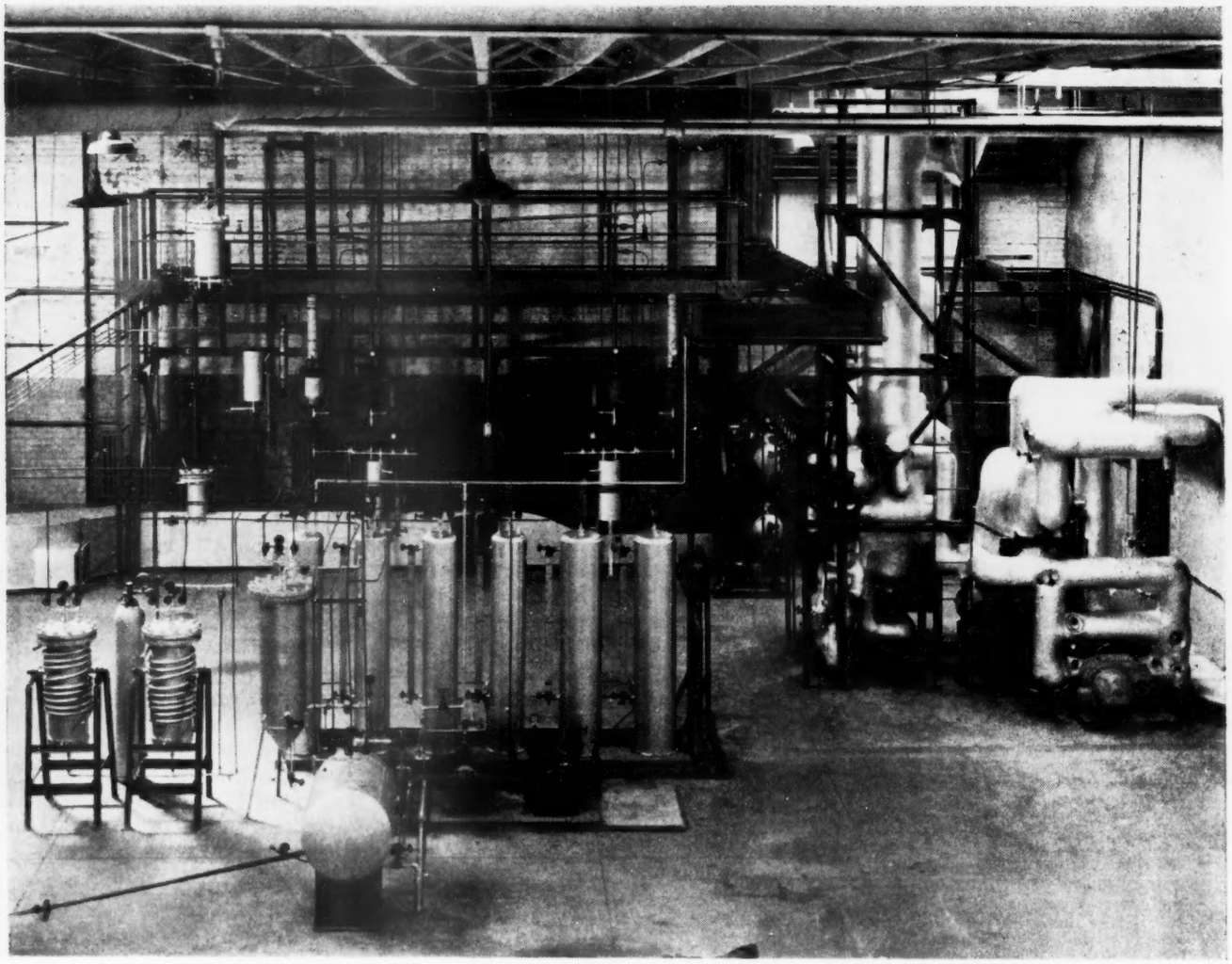


Fig. 1. The main solvent extraction unit at the new Edeleanu research laboratory on Long Island. In this assembly hundreds of solvents will be studied to determine their usefulness on scores of light and heavy products from various crudes. Many of these solvents will be synthesized in this laboratory

within very narrow limits.

Extreme precautions are taken in the laboratory layout to avoid any possibility of explosion, fire or other hazard. Samples and other petroleum or combustible materials are stored in a steel doored, brick and concrete vault on the main laboratory floor. Conventional fire fighting and first-aid equipment is handy throughout the entire plant. Electric motors are explosion-proof type.

The laboratory has its own machine shop where intricate and special designs of equipment instruments, etc. may be built. Four analytical and chemical laboratories are installed on the second level of the building, where a staff of chemists and assistants co-operate in the work of the main laboratory. A complete CFR testing engine unit will be installed in the laboratory as soon as delivery is made by the engine manufacturer.

At present the main experimental unit is used for solvent-treating large samples of naphthas at sub-zero temperatures, for the production of high octane number blending agents and lacquer solvents. The unit will also be used for extraction studies on lubricating oil distillates, at temperatures above 100 F. In addition to the benzol-SO_2 solvent already in commercial use in this country, the laboratory is investigating a number of new solvents and solvent combinations, for heavy oil treating.

THE first large commercial installation in America for the treatment of naphthas and light distillates for the production of high octane number blending agents is under construction, and will be operating sometime in June. This unit will treat 6,000 barrels of naphtha per day by a new solvent process recently developed.

In addition to the equipment already installed, plans are completed for the installation of units for dewaxing, deasphaltizing and extracting residual stocks, and erection of these units will be started in the near future. The laboratory layout is so arranged that this new equipment fits exactly into the plan.

The plan of the company for this research is a systematic investigation of a large number of groups or families of solvents, to determine their relative efficiency as to solvent power, selectivity, and effect on different properties of the fin-

Crude up, skimming out

Hot oil sold at a dime a barrel a little while ago and 84 refineries were running in East Texas

East Texas crude today is posted at $1.15 a barrel and just 12 refineries are running there —most of them limping

What does that mean?

It means when the price of crude goes up many a skimming plant goes down—and out

Dubbscracking is the way to make gasoline

With a Dubbs unit you can afford to pay the price for crude because you can make more gasoline out of it—and its Dubbscracked gasoline—your Dubbscracked gasoline

You can sell more of it and get the price for it

And make more money

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

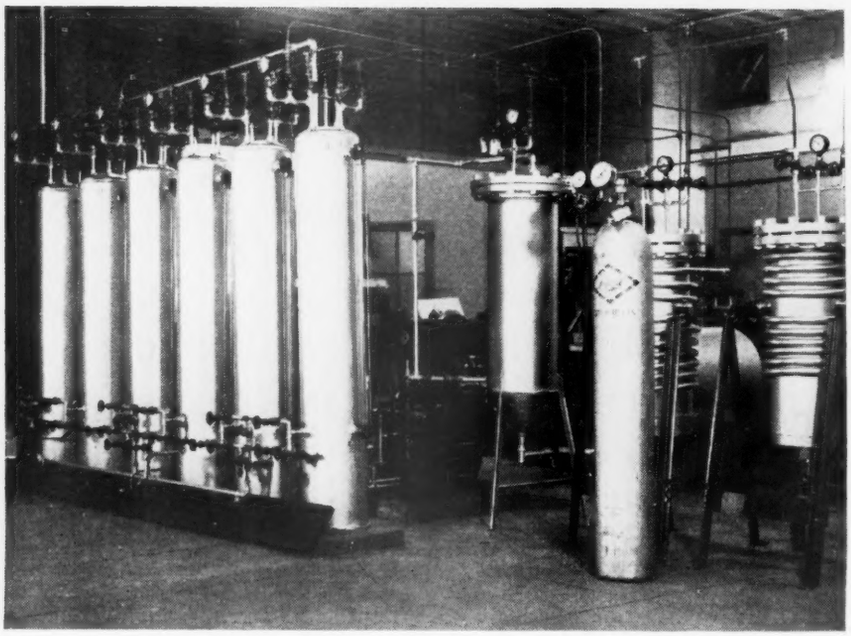


Fig. 3. Battery of solvent extraction columns, in the new Edeleanu research laboratory on Long Island. The coil-surrounded "pots" at right are filters for water removal from solvents

ished product. In following this plan the introduction of various chemical radicals and groups into the "base" chemical or solvent is carried out by the chemists, and a systematic study of the effect of the introduction of these substituents on the results obtained with the solvents so produced, is made. Because of this system of attack on the problems, the synthesis of these solvents, many of which either cannot be obtained commercially, or are very expensive when so purchased, is carried out by the chemical staff of the laboratory. Methods for the synthesis of solvents are worked out by graduate organic chemists, and the production of the solvents in large quantities is handled by assistants in larger-scale apparatus. This plan requires a very large amount of analytical and synthetic work in the laboratory, and when completed with result in a tremendous amount of information regarding the efficacies of a long list of solvent materials.

The Edeleanu Co. is under the management of Dr. Paul Obergfell; the laboratory work proper is under the direct control of Dr. E. Saegebarth, now abroad, who will return to his position sometime during May. The present staff of the laboratory is ten men, eight of which are chemists.

The necessity for synthesizing a large number of chemical solvents for the laboratory's use, requires a large stock of chemical intermediates to be kept and a huge amount of intricate work is involved in the production of these solvents. As the laboratory is completed and expanded, the staff will be correspondingly increased to handle the increased amount of work.

Zinc Chloride Catalyst Boosts Polymer Yield

In a paper presenting the results obtained in a study of the polymerization of propylene with zinc chloride as a catalyst, O. L. Brandes, W. A. Gruse, and Alexander Lowy, University of Pittsburgh and Mellon Institute of Industrial Research, tell how they obtained liquid polymer yields as high as 74.2, 43.5, and 64.4 per cent by weight under three varying conditions of temperature, pressure, and time. The paper was published in the May issue of Industrial & Engineering Chemistry, Ind. Ed.

The object of the investigation was to determine which set of conditions produced a maximum yield of liquid product of the gasoline type. It was found that there was distilled in the motor gasoline range a total of 74.5 per cent by volume of the 290-310 C. (554-590 F.) product, 85.9 per cent of the 200-210 C. (392-410 F.) product, and 92 per cent of the 150-160 C. (302-320 F.) product. As the experimental temperature was lowered, a successively higher percentage of the liquid product corresponded to the tripolymer of propylene, represented by the C_9 compounds.

The distillation curve of the 190-210 C. product showed prominent peaks pointing to C_8, C_9, and $C_{10\text{-}12}$ compounds, with somewhat lower peaks for the C_5, C_6, and C_7 compounds. The distillation curves of the 200-210 C. and 150-160 C. products had very pronounced peaks corresponding to C_9 compounds and somewhat lower peaks for $C_{10\text{-}12}$ compounds. The C_5, C_7, and C_8 compounds were present only in small amounts.

No evidence was found of the presence of aromatic hydrocarbons. The data indicated the presence of appreciable amounts of naphthenic hydrocarbons in certain of the fractions, in addition to olefins and paraffins.

Experiments were conducted in a closed pressure apparatus with a capacity of 1400 cc. (about three pints). Collected liquid products were distilled through a fractionating column. The results of the distillations are expressed graphically by plotting distillate volume against average boiling temperatures.

Patterson Joins Allied

A. R. Patterson, formerly of the Wiloil Corp., Pittsburgh, has become affiliated with the Allied Oil Co., Cleveland. Mr. Patterson has been with Wiloil for three years. Prior to that time he was with Freedom Oil Works Co., Freedom, Pa., for 14 years.

Limitations to the Practical Usage Of More Volatile Motor Fuels

By WHEELER G. LOVELL*

Presented before the convention of the Natural Gasoline Association of America, Tulsa, May 13-15, under the title, "Limitations to the Utilizations of the Full Potential Values of More Volatile Motor Fuels" as a discussion of the paper by Dr. G. G. Brown, entitled "Ten Years of Research," presented at the same meeting and published in the May 13th issue of National Petroleum News .

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WE WOULD all like to utilize all the potential advantages of more volatile fuels. There are two aspects of volatility which merit consideration. One is what might be called extreme front end volatility, or higher vapor pressure.

As Dr. Brown has pointed out very clearly, the use of fuels of higher vapor pressure alone offers to the driver of the car no gains immediately apparent to him in mileage, performance, or price of the fuel. Consequently, the potential advantages accruing to the customer are limited to the use of fuels of vapor pressure such as is necessary to have in order to maintain a balance with the overall volatility of the fuel.

Vapor pressure appears then, as one of the disadvantages accompanying fuels of greater over-all volatility. In order to use fuels of greater over-all volatility which have potential advantages for the gasoline user, it is sometimes necessary to have fuels of higher vapor pressures, and in this respect alone do the higher pressure fuels have a secondary potential advantage. This is by no means unimportant, of course.

It should be pointed out in connection with the use of fuels of extremely high vapor pressure—by which is meant higher pressure than must necessarily accompany any reasonable increase in over-all volatility—that adapting cars to use such fuels satisfactorily is by no means simple or cheap. This is contrary to a view that has sometimes been expressed, but a great deal of work has been done on the problem of handling fuels of moderately high vapor pressure. And some of the cars now on the road have fuel lines running outside the frame, around in front of the radiator, together with larger fuel pumps and other safety factors. One factor which has sometimes been considered as a limitation to the utilization of more volatile fuels is what has been called the style factor. The public has shown a preference for a car that is low, with narrow radiator openings, and with louvers on the hood which do not render the engine conspicuous. This does not appear to us as being fundamentally concerned with the use of more volatile fuels.

It is true, and it must be realized, that the automobile is style merchandise to a very considerable extent. The manufacturers are going to make a style which the public wants, because if they don't they will go out of business. However, this by no means signifies that this style factor will necessarily be a limitation on the use of fuels. It has not generally been so in the past, as witness the fact that, during the period during which present styles of car appearance have developed, cars have been improved in ability to handle more volatile fuels satisfactorily.

The style factor does, however, put a greater burden on the ingenuity of the engineer in that he must design the working mechanism of the car so that it will operate satisfactorily in a vehicle of such outward design and style that the public will approve. Sometimes, in order to do this, there is additional expense involved, and the automobile manufacturer must weigh the additional cost against the advantages to be gained by the use of the more volatile fuels.

These advantages of more volatile fuels—and we mean fuels of greater over-all volatility in this connection—are *potential* advantages. Volatility, as is also octane number incidentally, is an index of the potential value of a fuel. It gives an index of what *can* be done in the way of getting economy and performance out of a fuel when engine changes are made. As Dr. Brown has pointed out, volatility has practically no effect on power or fuel consumption of standard warm engines.

Only at low atmospheric temperatures or with cold engines, or with a less amount of heat on the manifold do fuels of greater over-all volatility appear superior, but their superiority under some conditions is very great. In other words, volatility doesn't, under most conditions, have much to do with what happens when the potentially superior fuel is simply put in the tank of a car. This is just another way of saying that engines have been built in the past to run on average fuels under a wide range of normal conditions. On the other hand, it is possible to make changes in an engine which will utilize much

*Research Laboratories Section, General Motors Corp.

of the potential superiority of a fuel of greater over-all volatility.

These changes are, as Dr. Brown has demonstrated with his road-test data, simply to reduce the mixture temperature and make some adjustments on the carburetor. It sounds very simple, and it is; and the advantages are very great. It does, however, have some limitations in the way of practical difficulties which must be taken into account. It is these which we should like to name and discuss for a few minutes.

The first limitation has to do with how far one *can* go in reducing mixture temperature. There is no question but that mixture temperatures have been going down over a period of years. But what is the bottom? Now mixture temperature is concerned with three factors: first, how hot the air going into the carburetor is, second, how much heat the manifold supplies, and third, how much heat the fuel takes out in vaporizing. By using these three factors, Dr. Brown has taken the final mixture temperature on his experimental car down about 50°. He has reduced the temperature of the air going to the carburetor about 20° until it is only about 10° above the atmosphere.

Clearly, atmospheric temperature is probably the bottom here; we can't have air refrigerators on cars very easily at present. But at the same time, we can't run cars around the country without hoods on them as Dr. Brown has done, because the customers might not like them. What would have to be done to keep the carburetor inlet air temperature near atmospheric is to rig up a special insulated air duct to the carburetor; that is perfectly possible from a strictly engineering standpoint. The second factor that can be controlled to reduce mixture temperature is the supply of less heat to the manifold. Dr. Brown on his experimental car has done a very thorough job of bundling and insulating the manifold and has reduced the mixture temperature about 20° in this way. This is probably about the bottom and is about as much as can be expected.

The third factor is the amount of heat that the evaporation of the gasoline takes out of the mixture. The observed difference between gasolines of extreme differences in volatility is about 5 to 10 F., and this looks like about the limit.

To add up the effect of these different factors, then, the maximum reduction that might be expected on this car which is probably a fairly representative vehicle, is about 60° or only 10° more than that accomplished experimentally. To do that, we have used a very volatile fuel, taken all the heat off the manifold, and run an insulated air duct to the carburetor, heated the fuel line to prevent ice formation and also adjusted the carburetor slightly. All these things are quite possible from an engineering standpoint and seem to indicate about what the limit is to progress in this direction. The advantages of doing this are a very considerable increase in performance—acceleration and top speed—and little sacrifice in economy.

NOW, we can think about what happens when we do this, and what the practical limitations of doing this might be. In the first place, cars have to operate under a wide variety of climatic conditions and over a considerable range in temperature. With our imaginary setup the mixture temperature is controlled by the atmospheric temperature only. But if the temperature drops 30° over night, as sometimes happens, and the mixture temperature is right for the high temperature, it is too low for the low temperature. So we have to put on a thermostat and heat the mixture up 30° when it is cold.

This is perfectly possible from a strictly engineering standpoint, of course, but it clearly limits the maximum amount we can cut down the manifold temperature. We have to heat the mixture up when the weather is cool so that the mixture will not be too cold, and in fact, not be much colder than when the atmospheric temperature is high and no heat is being supplied.

This comes about because we need to operate with a fairly uniform mixture temperature as we do now with thermostats and so on. Now clearly, we do not need to provide for extremes of temperature from 40 below in the winter to 100 above in the summer, because we assume a seasonal adjustment in gasoline volatility to take care of this. But we do need to take care of daily and weekly variations. In other words, on the average, we have to heat the mixture half the days in order to make up for the other half when it is too cold. Now this is quite possible; the important thing is that it does cut down the amount by which the manifold temperature can be reduced. That decrease in allowable reduction may be as much as 30°, and this cuts quite a slice off the 60° maximum temperature reduction we mentioned a moment ago.

We can not emphasize too strongly the absolute necessity of building a car that will operate equally well on Tuesdays and Thursdays irrespective of changes in atmospheric conditions. The two big handicaps under which the automobile operates are those due to variations in atmospheric temperature and altitude. The success of the automobile has been largely due to overcoming these handicaps, and it would be clearly folly to become subject to them. Consequently, the maximum reduction in mixture temperature we can get is limited to a half—or less— of what one might otherwise expect. There is thus a serious limitation to the use of more volatile fuels in that the necessity of operating under a range of climatic conditions has limited the realization of the values of more volatile fuels to one-half or less of their potential value.

There is a second limitation to the effective use of highly volatile fuels which at present is even more serious than that discussed thus far. Let us assume that we build a car—in imagination—that will permit the maximum reduction in mixture temperature subject to the limitation just discussed. Now this car needs a very volatile gasoline to operate at all satisfactorily. But, as Dr. Brown has shown so well, when we put in

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it a gasoline of much less volatility the car does not operate so well—it stutters and coughs on acceleration, for instance.

Now that difficulty can be overcome by putting more heat on the manifold when we put the less volatile gasoline in the tank. So we put a little imaginary knob on the dash of the car to control that. When the driver buys some gasoline, he adjusts the knob of his mixture thermostat to correspond, and all is well except for two things. The first is that such adjustments are a nuisance, to put it mildly. A good deal of the success of the automobile has been due to the fact that it has become more and more automatic, so that anyone at all can drive a car—the driver doesn't even have to know that the engine has cylinders. More and more adjustments have been taken off the dash, so that there are practically none left except the light controls. Clearly we should not sacrifice that advancement and put on a gasoline volatility adjustment. The customer wants a car to go places in, not to fiddle with.

Furthermore, suppose we do have such an adjustment on cars and the owner upon driving into a filling station wants to set his volatility control to suit the gasoline he is buying. How does he tell how to do it? There is at present no index of the volatility of gasoline—no specification—all he does is buy, let us say, "regular" gasoline. And we all know that the variation in gasoline being sold now is enormous, and about as great as the range of gasolines Dr. Brown worked with. Cars have to be built to run on practically all gasoline at present. If there were some specification of gasolines so that the range was not so great, or some index so that the driver could be told to buy gasoline of a certain volatility without designation of brand name and be sure of getting it, the situation would be quite different. But under present conditions cars have to be built to operate reasonably satisfactorily on the gasoline of about the poorest volatility. Consequently, such cars cannot take full advantage of the potential value of the more volatile fuels.

These two limitations: first, that due to atmospheric variations which cut down the maximum theoretical utilization of the potential value of more volatile fuels and, second, that due to variations in gasolines commercially available which practically limit the advancement to the least volatile fuel because of the lack of suitable widespread designation of gasolines with respect to volatility, are both very serious. The success of the automobile is largely due to overcoming the inherent handicaps due to the necessity of operating with changing temperature, altitude, and fuels. We can not do much about the weather and elevation; but perhaps something can be done to secure more uniform fuels, or classification of fuels, so that we may take better advantage of their potential values. Because we all want to see more progress towards higher operating efficiency and conservation.

Virginia Oil Men Vote Against State Code Meeting

ROANOKE, Va., May 21

THE Virginia Oil Men's Association, holding its annual convention here today, voted unanimously to table a request that a state-wide meeting be called to consider the proposed voluntary marketing code.

The request was in the form of a letter from Wilmer R. Schuh, Milwaukee, president of the National Association of Petroleum Retailers, who, with C. E. Arnott, of Socony-Vacuum Oil Co., and Paul E. Hadlick, National Oil Marketers Association, constitute a committee which is sounding out the industry on the proposed Federal Trade Commission code.

J. R. Vaughan, Pure Oil Co., Roanoke, was elected president of the oil men's association which is composed of major company officials and Independents alike. B. L. Ray, Standard Oil Co. of New Jersey, Richmond, was elected first vice-president, and W. C. Litterer, Atlantic Refining Co., Richmond, second vice-president. New members of the board of directors are: L. D. Kirkmyer, James River Oil Co., Richmond, E. J. Schul, Home Oil Co., Norfolk, and G. M. Timberlake, National Oil Co., Richmond.

E. A. Khyn, secretary of the Virginia Petroleum Industries Committee, reported on the state and national legislative situation as it affects oil. He thanked the oil men for their co-operation in presenting the industry's views to the state legislators. He suggested that oil men let their congressmen know how they feel toward the "alky-gas" proposals and the fuel oil tax bill.

Following the association's meeting, Virginia independent oil jobbers held a separate meeting, adopted by-laws, elected new officers and re-organized their state association.

L. D. Kirkmyer, Richmond, was elected president of the Independent group which is to be known as "Virginia Petroleum Jobbers' Association". Ira F. Walton, Roanoke Oil Co., was elected vice-president. E. J. Schul, Norfolk, retiring president, was elected to the board of governors. Al Tenser, Richmond, continues as secretary.

The other six directors elected to the board, which will run the association, are: McCaleb Higgins, Higgins Oil Co., Galax; Tucker Watkins, U. S. Oil Co., South Boston; M. B. Whiting, Whiting Oil Co., Clifton Forge; R. G. Spratley, Delta Oil Co., Petersburg; P. H. Smith, Lynchburg; and Garland Sexton, Whytheville.

Provisions were inserted in the by-laws of the association designed to exclude from membership all but independent oil men.

The jobbers' association voted to submit to Virginia jobbers for their approval or disapproval the proposed voluntary code.

Improving Oil Production Efficiency Benefits Public in Lower Prices

TULSA, May 23

ECONOMIES brought about through betterment of operating methods in the producing fields have been passed on to the public in the form of lower prices for petroleum products, in large part, declared C. H. Lieb, president of the Carter Oil Co., Tulsa, in an address before the Mid-Continent section, American Institute of Mining & Metallurgical Engineers. The occasion was the dinner held by that section May 19.

Mr. Lieb's appearance was news in itself, as he rarely addresses conventions or meetings. His talk, entitled "Economics of Oil Producing Practice," evoked prolonged applause from the 150 engineers, geologists and executives who heard him. He was preceded on the program by John M. Lovejoy, head of the Seaboard Oil Co., who is president of the A. I. M. E.

Two factors were stressed by Mr. Lieb as being responsible for the economies now realized in producing oil. One is the understanding, gained slowly and over a period of many years, of the function of reservoir energy in moving oil from the producing horizon into the hole and in lifting it to the surface. He traced the history of development of such knowledge. Only recently, he said ,have producers come to realize that flowing production is at lowest cost. "Actually," he said, "about 1910 or later, operators endeavored to get a producing well to pumping as quickly as possible after completion. A well was not really considered to be completed until it was operating on the pump."

Along with the development of technique for maximum recovery of oil with minimum expenditure for power, he said, was the growing realization that the crude could be stored in its natural reservoir and withdrawn far more economically than if produced at maximum rates, as previously had been done, and stored in steel tankage above ground .... Previously, every new oil field was a race between the driller and the tank builder."

Legal machinery had to be developed during this period of transition from the old order to the new, to permit operators to produce their properties equitably. "This general procedure," said Mr. Lieb, "brought in state governmental agencies and the practice has come to be referred to as proration." Following is the principal part of Mr. Lieb's address:

Economics of Oil Producing Practice

By C. H. Lieb*

PRORATION, today, signifies merely a restraint upon production, and it is far from being in its most desirable form. Theoretically, proration should be synonymous with efficient producing practice as applied to any pool. Largely, however, because the administration is in political bodies, it is subject to political exigencies and consequently is a compromise which leaves much to be desired.

Proration was first conceived as an implement to balance "supply and demand." It is still so regarded by many people and without critical attention to efficient rate of production. The underlying purpose should be to permit each well to produce that proportion of oil that will best conserve reservoir energy and lead to the largest ultimate recovery from the pool.

That, in my opinion, is true conservation. That affords petroleum engineers their widest field of usefulness and affords state regulatory officials their greatest opportunity to function for the benefit of the public interest. Some lawyers, ranking high in their profession and singularly experienced in this field, are of the opinion that this efficient rate of production can be imposed under the existing statutes at least of some oil states. The two specific instances in Oklahoma most nearly approaching proration on the true principle are Keokuk and South Burbank fields.

Operators and state officials charged with conservation responsibilities should regard "proration" as the efficient producing rate. Proration should not be regarded as a method to secure some advantage by using political influence, neither should it be administered by "catch as catch can" methods or by juggling wholly incomparable figures and arbitrarily writing up the allowable in one field by 500 barrels and writing down another field by 1000 barrels.

If proration shall be based on the efficient rate of withdrawal, the matter of price is not a factor of importance, if at all, in the fair distribution of crude to be produced. At present, operators and officials charged with the administration of state

*President, Carter Oil Co., Tulsa.

conservation laws are conscious of the price element affecting allowables, and frequently there are questions of inequities and discrimination. Proper bases for proration as we advocate would eliminate these annoying, wasteful, and costly aspects now in the situation and achieve true conservation that is highly in the public interest.

The industry, the state officials and indirectly the consuming public must choose whether they wish true conservation of a valuable, exhaustible natural resource and efficient producing operations and reasonable prices for crude and products, or whether they want discriminatory tactics, extravagant and inefficient operations and higher prices.

Even a very brief outline of the developments of oil producing practices indicates clearly that very substantial progress has been made. The financial condition of producing companies in relation to crude prices proves the point. The average posted prices for 36° gravity Mid-Continent crude for 5-year periods from 1915 to the end of 1935 are as follows:

	Average		
1916-1920 incl.	$2.20	High 1920, $3.42;	Low 1916, $1.26
1921-1925 incl.	$1.68	High 1925, $1.89;	Low 1923, $1.55
1926-1930 incl.	$1.48	High 1926, $2.13;	Low 1930, $1.23
1931-1935 incl.	$0.83	High 1934-5, $1.00;	Low 1931, $0.63

In 1927, the earnings of six representative companies depending substantially upon crude production aggregated $62,000,000; the earnings of the same six companies in 1935 were $59,600,000, approximately. In 1927, the price of 36° gravity crude averaged for the year $1.30, whereas the price of the same crude in 1935 was $1 per barrel. The earnings of these representative companies were only 4 per cent less in 1935 than in 1927, while the average crude price was 30 per cent higher in 1927 than in 1935.

We believe this is a fair representation. Producing companies were on a profitable basis during 1935, when a price of $1 per barrel prevailed for 36° gravity crude. A few years ago, producing companies could not have survived on a price of crude as low as $1 per barrel. The fact that a profit is possible today is entirely due to the greater efficiency and lower costs of production.

Further improvements in the profit margin will not be realized unless a higher crude price prevails or unless greater efficiency is secured in producing practice. A large part of the benefits derived from efficient operations has been passed on to the public in the form of lower prices for gasoline and other products. This fact definitely proves, in our opinion, that the public interest has been considered and has permitted wider enjoyment of the benefits to be derived from the use of petroleum products.

It is our opinion that a price very much or any higher than the present crude price not only cannot be anticipated by any logical analyses, but would be detrimental to the business from a long-range viewpoint. We believe that the margin of profit to the producer can be materially improved by wider adoption of advanced producing practices. Such a policy generally adopted by the oil industry will not necessitate increasing prices of the products of this industry to the public and should create a wider use and a consistently increasing volume that cannot otherwise be achieved. Producers demanding higher crude prices must admit inefficient operations. Also, higher prices place a premium on indolence and carelessness.

There are a few striking examples that might be cited as to the manner in which the petroleum industry can save very substantial amounts. Seeking a larger income from higher prices of crude and products is simply taking the easiest route for profit in the industry. The same profit can be achieved by acceptance of proven engineering principles and the application of proven practices.

Let us look at the cost of development of a field on a wider spacing pattern. The Lucien field, in Noble County, Okla., furnishes a good illustration. This pool was discovered Sept. 29, 1932. It was contemplated to be developed on a pattern of one well to 40-acres. This has not been fully attained, and the development at present averages one well to 38-acres. The average cost for drilling and completing a well in this field is approximately $57,000, and the average total depth is about 5200 feet. To May 1, 1936, there has been recovered from this field, 9,172,591 barrels of oil. It is estimated that, as of May 1, 1936, this field shows an operating profit of practically $4,000,000.

Using the same basic figures for estimation, if this field had been developed on a 10-acre spacing program, there would still be an unreturned investment covering development and operating exceeding $9,000,000. In other words, this field paid out development in about three years, whereas, if it had been developed on 10-acre spacing, there would still remain a very heavy investment, which it is questionable would ever be paid out.

It is not proposed that 40-acre spacing, or any other spacing pattern, should be the universal rule. We propose, however, that each field should be developed on the pattern that is best adapted to the conditions and characteristics of that pool. The ideal condition might be conceivably, an irregular spacing pattern, but such a plan is most difficult to put into effect, if not impossible, because of property ownerships prevailing in most likely territory in the United States.

There are many arguments advanced against wider spacing, and probably some of these are sincerely presented; however, it is difficult to understand the position taken by some companies and some individuals. Probably what really accounts for the opposition to wider spacing is yielding of conviction on the part of the engineers or a lack of understanding and vision on the part of engineers and executives. It is an expression of a philosophy of a temporary advantage without regard for the long-range view. Often, too, lawyers lacking in progressiveness and with antique notions of the law are obstacles.

We agree that a pool, where

the depth of the wells might be 500 feet, may not economically justify 40-acre spacing. Perhaps in such a pool, the wells should be spaced one to 5-acres, or some other high degree of density. The thickness of the producing formation, the degree of porosity and permeability, the reservoir pressure, the amount of free and dissolved gases are all factors that should be considered in determining the density of wells in any field. We challenge anyone, however, to refute the fact that more money will be made by all parties interested in the production of wells having a depth of 6000 feet and below (within the usual ranges of characteristics) if the wells are spaced more widely than one to 10-acres, than if the field is developed on a pattern of one well to ten-acres or less.

Economic spacing of wells has been defined clearly as: "That, unless an added well seems likely to yield sufficient *additional net* income to permit a fair margin of profit, its drilling must be considered uneconomic."[1] It has been stated authoritatively and not refuted that close spacing of wells is often detrimental to ultimate yield, because close spacing leads to and harmonizes with inefficient and improper use of reservoir energy.[2]

Conditions vary in each pool and selectivity of producing practice must be applied the same as proper selection of a pattern for development. In pools where there is a fairly active water drive, a rate of withdrawal can be ascertained that will be highly efficient. If the withdrawal is at such a rate that the reservoir pressure is approximately maintained, it is possible that little, if any, outside power will be required to produce all of the recoverable oil, and huge investments, consequently saved.

While not accurately familiar with the East Texas field, it is believed that the consensus of opinion of engineers familiar

C. H. Lieb, president, Carter Oil Co., Tulsa

with this operation is that the rate of withdrawal in this field should not be increased above what it is at present, which is 450,000 barrels per day approximately. It is the opinion, I believe, that any higher rate will permit the water drive to lag, with the consequent rapid decline in pressures and the necessity to resort to artificial lift at an early date.

There are about 20,000 wells in East Texas and assuming a figure of $5000 per well for artificial lifting equipment, we reach a possible total investment of $100,000,000 for lift equipment. Interest on such an investment, at 4 per cent per annum, is $4,000,000 per year, which the operators in that field are saving by adapting the rate of withdrawal to an effective water drive. Assuming a nominal figure of 10 cents per barrel for increased operating and maintenance expense for pumping wells, we obtain an estimated $16,000,000 per year as savings in East Texas by maintaining a rate of withdrawal commensurate with the pressure maintained by the natural water drive. The total saving is $20,000,000 per year, or roughly, $1000 additional profit per well, per year.

In fields that have little or no water drive, it is necessary to conserve the gas energy to the maximum degree. It has been determined that there are fields in Oklahoma which produce crude having a gravity of 40° at the surface, that the gravity in the reservoir is 62°. The higher gravity fluid in the reservoir flows more freely to the drill holes and if the production can be so regulated that the gas will not be drawn out of solution, the probabilities are that greater recovery will be obtained than if the reverse is the case. In many instances, it will be necessary to inject gas into the reservoirs under pressure, in order to maintain sufficient reservoir pressure that a large part, if not all, of the crude will be produced without other artificial lifting means.

It is in such fields without water drive and with either free gas areas or large percentage of gases in solution that are ejected readily, that we have one of the most serious problems affecting the industry today. Proper producing practices, under these conditions, are in direct conflict with the established law of capture. It is highly essential that some means be found to modify the interpretations of the law of capture in jurisprudence.

COMPULSORY unitization of all vested interest in such a pool is a very decided step towards true conservation of a natural resource. The engineers in the oil industry must take up this problem and work out a solution. Probably the best method to develop an oil field that is lacking in an active water drive is to work out a spacing pattern commensurate with the depth of the wells and other characteristics and watch the decline in bottom hole pressures during the early producing life of the pool. The decline in pressure drop should be retarded at some point which can be readily ascertained, and when such a point has been reached, gas should be injected into the reservoir to maintain the predetermined pressure. The economics of this procedure are that a part of the money saved from drilling is expended for plant and line facilities for gas injection, as a result of which total investment in the field is very, very substantially less than under previous practice

[1]"Economic Spacing of Oil Wells", by M. G. Cheney, Bulletin of the American Association of Petroleum Geologists, Volume 19, Number 6, June, 1935.

[2]John R. Suman, "The Well Spacing Problem: Low Well Density Increases Ultimate Recovery." Oil Weekly, May 28, 1934.

and the recovery of oil is as high or higher than under the old methods.

The important part that the engineer plays in advanced practices applied to the recovery of oil should be perfectly obvious. The trouble with the engineering profession is that its members fail to emphatically insist upon their convictions being applied. The profession of production engineers must be raised to a much higher ethical standard than heretofore. Occasionally, one hears of a lawyer who will give advice and opinions along the lines that he knows his client desires. These lawyers, however, are not very numerous and their rating is not particularly high in the ranks of their profession. Engineers should adopt a similar point of view, and should insist upon methods and practices being applied which they know, in the long run, will bring more profit to their employers.

Engineers in the petroleum business need to develop that characteristic called "courage", and avoid mental dishonesty. There is too much an attitude on the part of engineers and executives to put their jobs above their responsibilities. They fail to impress persistently their superiors with the facts and true situations and results. The industry needs strong men who assert and advocate their convictions regardless of personal consequences. In the end, the cowardly man in any capacity, who consistently retires to a safe position, does no good for himself or his company.

There simply is no question but that oil fields, in which unnecessary wells are avoided and where intelligent effort is applied so as to maintain pressure and produce all of the oil economically recoverable without resorting to expensive old style pumping, will be immensely more profitable to the operators and will return as much or more to the royalty owners than as operations were conducted even ten years ago. This addition profit to the operators and equal, if not better, return to the royalty owners can be achieved without any increase in crude prices and consequently, without any restriction on volume of the products sold by this industry to the public.

One of the greatest problems confronting the rank and file of the industry today is to overcome the inertia of executives, proration officials, royalty owners, and stockholders with respect to universal adoption of proven scientific principles and practices. It is almost unbelievable that many companies with complete and competent staffs of technical advisers consistently and arbitrarily oppose application of these practices which can only rebound to their benefit. It seems to be an insuperable task to attempt the education of stockholders in all producing companies, but it does seem possible to conduct a program of education within the ranks of the industry.

IT IS up to the engineers and technical people, working with operators and producers, to fight for the complete adoption of wider spacing and pressure maintenance. There can be no question as to the ultimate adoption of these practices, but the time element in relation to prosperity of the oil business is highly important. It appears to be a task of the technical people in the companies to insist upon the use of advanced and proven methods, not only for the preservation of professional ethics and prestige, but even in the preservation of their jobs.

There is some thought occasionally that engineers will supplant all of the practical operators and that wider adoption of principles being advocated will result in loss of employment to many men. Such is decidedly not the case. Under modern procedures, many more oil fields have to be produced currently so that, in the aggregate, there are as many wells, or more, than under the old methods, and fully as much, if not more, employment of labor necessary. It takes an intelligent practical man to apply and attain the best results as devised by the technical people. It is refreshing to observe that most of the practical men in the business have appreciated this condition, and are working hand in hand with the technical people.

One also hears a great deal at present about reserves. There is fear in some quarters that reserves are too high and that too many oil fields are being found. We have always had crude reserves, although in past years we did not estimate what these underground reserves were, because it was thought that aboveground reserves in steel storage were the only factor which was statistically and economically important.

Consumption has increased and more reserves are required for this higher rate of use of petroleum products than in past years on a lower rate of consumption. Adjusting present reserves for the higher consumptive rate, it is only the relative increase in amount of reserves over any interval that represents any cost to the industry. This cost is relatively unimportant in the aggregate of features that make up the total cost of a barrel of crude.

It has been estimated by competent accountants that carrying reserves aboveground in steel storage costs from 5 cents to 15 cents per barrel, per year. It has likewise been estimated that cost of carrying augmented underground reserves is of the order of 2 cents per barrel, per year. Even when we add the increased cost for finding efforts, drilling, acquisition and carrying leases, and overhead, we still get a total cost of producing oil that is easily 15 cents or 20 cents per barrel less than under the old methods when every well, regardless of depth or characteristics of the producing horizon, was drilled on a 10-acre tract or less, and the whole effort was to get the well on the pump as quickly as possible. This disparity in cost may amount to as much as 50 cents per barrel.

Each company which is following these principles and practices is forced to assume unnecessary cost because of the indifference or refusal on the part of other operators to apply the same improved methods. If wider spacing, unitization, and pressure maintenance were universally adopted in the oil industry, it is a perfectly safe and conservative prediction that the producers could anticipate a profit of from 10 cents to 20 cents per barrel above what can be realized today by any producer with the limited application

of these improved methods.

Also, by adoption of these principles, we get a stabilized situation that cannot be secured possibly by the wildly fluctuating production trends, costs, and sales prices that formerly prevailed. One could adduce as an argument against the adoption of these practices that individual wells might be prorated to such a low allowable per well that the profit would be eliminated. Going so far as the imagination can travel, it is scarcely conceivable that such a situation could arise, but, assuming that it might, it is believed that such a condition would operate the economic law of "supply and demand" to the extent that prices would decline, not abruptly, but to some extent which would retard development and in a relatively short time, the lack of finding new oil or additional oil in developed fields would result in an increased allowable for existing producing wells. Even in such an extreme case, we would have a far greater degree of stabilization than has ever been known in the history under practices as followed.

Summarizing, there are several important problems for the oil industry, and particularly the technical people within the industry, to perfect as rapidly as possible:

1. Universal adoption of wider spacing adapted to the peculiarities of each pool, unitization, and pressure maintenance as standard operating practices.

2. Education of public officials and the public indirectly interested in the oil business to the end that, under the police power, the law of capture shall be so modified, certainly as to permit, and whenever possible so as to compel, the drilling and producing practices that are here advocated.

3. Persistent and consistent efforts on the part of the industry to improve operating efficiency and achieve lower costs and wider margin of profit on about the existing price levels for crude and products.

4. A better standard of professional ethics among the engineers and other technical people engaged in the oil business, and education of the executives as to the benefits from the practices advocated.

5. Establishing proration on a more scientific basis. Basing allowables on well potentials or flat rates per well are thoroughly unsound from scientific or economic viewpoints. My opinion is that proration should be the allowable per well coincident with a rate of withdrawal utilizing the reservoir energy to the greatest degree of efficiency. If the technologists in the industry can agree upon a uniformly accurate method of estimating reserves, perhaps allowables could be a factor of reserves.

Grateful acknowledgment is given for helpful criticism and suggestions in the preparation of this paper to Mr. J. A. Veasey, Mr. F. W. Floyd, and Mr. L. F. McCollum.

Co-op. Sells 68 Million Gallons in 1935

WASHINGTON, May 15.—The Illinois Farm Supply Co., a co-operative organization with 85,000 farmer members and 60 member service companies in the state, sold 68,000,000 gallons of gasoline, kerosine, distillate and lubricating oil in 1935, the Farm Credit Administration announces.

In addition to its petroleum products which include greases and insecticides, the Co-op. handles tires, tubes and paints.

A special report on the company's activities and organization made by J. H. Lister, agricultural economist of the Co-operative Division of the FCA, reveals that its 1935 business amounted to $10,095,755 and its 1935 earnings to $1,045,117. Cash dividends totaling $805,000 were paid to members and $1,486,792 went to the state treasury in gasoline and sales taxes. The 1935 business was 25 per cent above that of 1934.

Some of the 60 service companies are county-wide, while others cross county lines and serve several counties. The first was organized in 1923 but real growth began with the organization of the Illinois Farm Supply Company in 1927. Now all 60 are related to this company by stock ownership.

The member service companies are financed locally by the sale of preferred stock to farmers, usually at a par value of $25 and with a cumulative dividend of seven per cent.

At the close of 1935, farmers' investment in the 60 companies amounted to $981,595. There was also a combined accumulated surplus of $1,195,905, which was used as working capital.

The member companies have warehouses, bulk plants and offices and nearly one half of them have retail service stations. The 60 companies owned 163 bulk plants in 1935 and 54 co-operative retail service stations.

The earnings from operations are returned to members on a patronage basis after suitable reserves for working capital have been set aside.

The trucks used in distributing supplies are not owned by the co-operatives. Truck salesmen must furnish their own trucks but the co-operative supplies the tanks. The truck salesmen are responsible for all losses resulting from credit which they extend. Each salesman is required to create a cash reserve which is held by the service co-op. and which must equal the amounts of accounts receivable which have been outstanding for 45 days or longer.

All of the member company co-operatives are ruled by an agreement to purchase all supplies through the state organization.

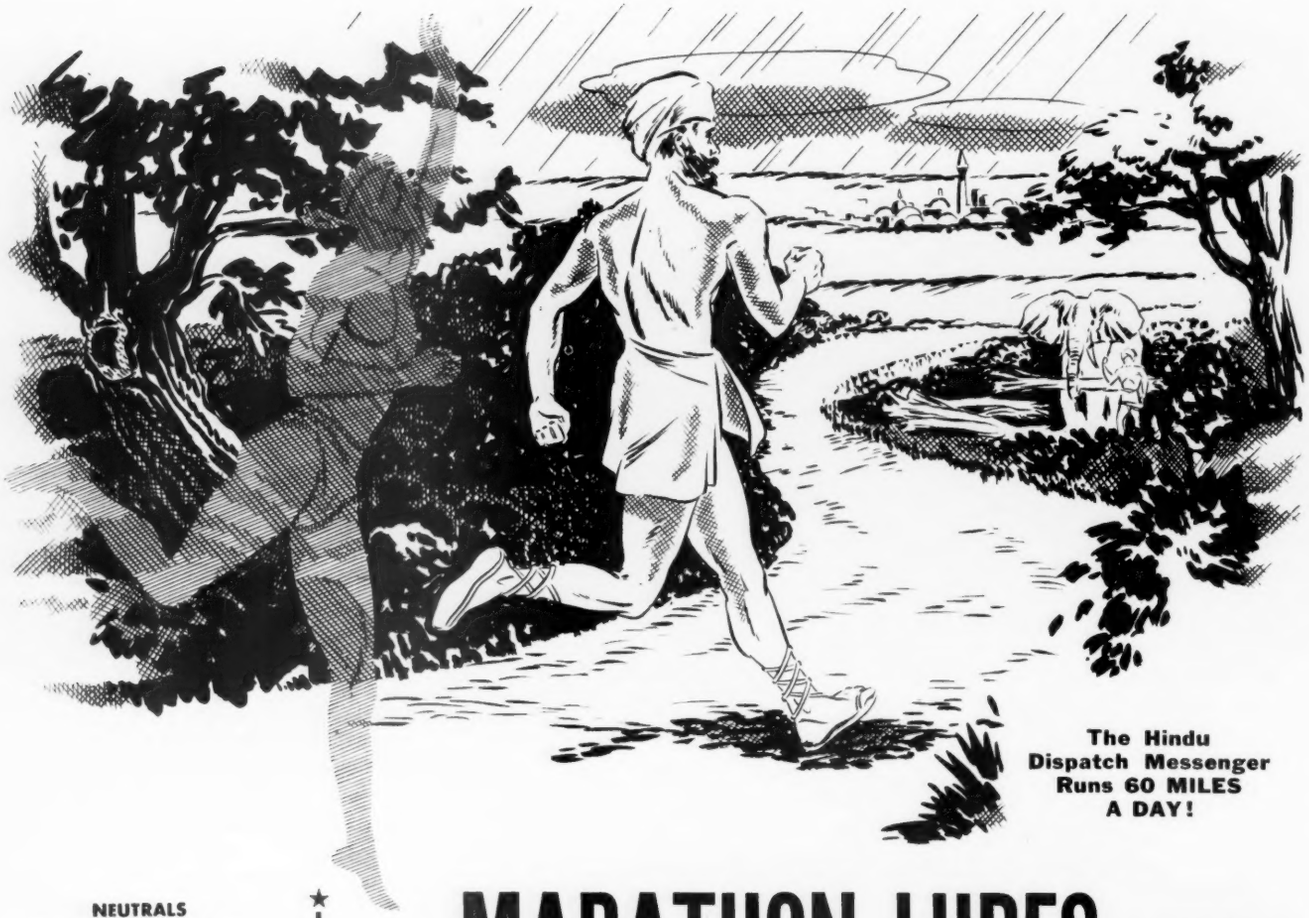
Tourist Auto Trailers Now Near Million

WASHINGTON—The American Automobile Association predicts that nearly 1,000,000 people will enjoy the comforts of home along the highways this tourist season in house trailers attached to their cars.

The growth of popularity of these "homes on wheels" in recent years has been phenomenal, the AAA says. It believes that economy, comfort and absolute freedom of travel have been the principal factors in this growth.

Trailer fans have organized at least two informal associations, the Tin Can Tourists of the World and the Automobile Tourist Association, which sponsor regular meetings of the trailer population in various sections of the country.

BUILT FOR ENDURANCE



The Hindu Dispatch Messenger Runs 60 MILES A DAY!

NEUTRALS
150-3 10-20 Pour Test
180-3 10-20 Pour Test
200-3 0-10, 10-20 Pour
200-5 6-10, 10-20 Pour
280-4 10-20 Pour Test

•

BRIGHT STOCKS
150-160 D Pour Test:
0-10, 10-25, 25-40

•

CYLINDER STOCKS
No. 3 600-W Steam Ref.
Olive Green

•

PARAFFIN OILS

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WAX
124-126 AMP White Scale

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MOTOR OILS
MARATHON
"Endurance" Motor Oils
TROXOIL Motor Oils
MULTIPOWER
Motor Oils
PRIVATE BRAND Oils
compounded to jobbers'
specifications

MARATHON LUBES stand up at the HIGHEST motor speeds

● The Hindu dispatch messenger, with his tough physique, is 'built' for endurance. While carrying official messages from town to town, he runs as far as 60 miles a day, and keeps up this gruelling pace indefinitely. He eats sparingly of rice and greens and requires but little rest at night.

Like this Hindu "superman", MARATHON LUBES are also 'built' for endurance. They stand up under the highest motor speeds and give maximum protection to bearings because: (1) They are made from Ranger paraffin-base crude; (2) They are manufactured with the most modern equipment, each of the many steps in processing being in charge of expert operators and under the most scientific control; (3) They are under constant laboratory check to insure uniform processing and development of the well-known heat-resisting qualities of Ranger crude.

MARATHON LUBES earn maximum profits for jobbers. Write for quotations.

MARATHON OIL COMPANY, General Sales Offices: TULSA, OKLAHOMA
Division Office: Ft. Worth, Texas

MARATHON

Industry Affected by Proposed Laws in Pacific Northwest

By JACK N. WESTSMITH
N. P. N. Staff Writer

LOS ANGELES, May 15

VOTERS in the state of Washington are being besieged with a flood of initiative petitions, some of which have a direct bearing on the oil industry. However, although 21 petitions were filed with the Secretary of State at Olympia, up to May 5, observers were of the opinion that not more than three or four woud receive the endorsement necessary to win them a place on the election ballot Nov. 3.

Each initiative must be signed by 50,000 qualified voters before it can be put up to a general vote and already 5 of the initiatives filed have been abandoned because of the slip-shod and inefficient manner in which they were prepared.

It is interesting to note that from 1926 to 1934, inclusive, only 55 initiatives were filed in this state and of these, 47 failed to get on the ballot. The 8 which did receive th proper endorsement were all passed. With this high mortality of such proposals, as a background, efforts are being put forth in the present instance to educate the voter to analyze the petitions carefully, as well as the credentials of the solicitors, as a means of preventing the enactment of freak, conflicting laws.

At least four of the 21 initiatives are of interest to the Pacific Coast oil industry and it is predicted that two of these have a better than average chance of getting on the ballot. The 21 initiatives are numbered 98 to 118, inclusive.

Initiative No. 99 (Sponsored by G. R. Sumpter of Property Owners Association of Washington) places all streets, alleys, bridges and tunnels in every incorporated city and town on the state highway system, including all future additions. It provides that one-fourth of *gross* highway funds from all sources (gas, tax, license fees, etc.,) shall be returned to cities on the basis of their motor vehicle registration. It is also mandatory that one-half of all funds returned to cities must be used for payment of interest and principal of bonds and warrants now outstanding.

The result of such a measure would be to take motor vehicle revenue paid by owners and operators of vehicles, for the specific purpose of building and maintaining highways, and apply a portion of that revenue to uses other than the original purpose. Opponents of the measure claim it would so reduce the funds for new construction and maintenance as to seriously cripple the highway system of the state and counties. Long range predictions are that this measure will not make the ballot.

Initiative No. 113 (Sponsored by M. E. Beals, Seattle) limits the tax on gasoline to 3 cents per gallon instead of 5 cents as at present. It also provides that such tax can be used solely for highway purposes. The annual license fee on private cars would be limited to $3 and it would leave it up to the legislature to make up deficits from trucks, commercial cars and busses. It is considered doubtful that this initiative will get on the ballot.

Of all the measures filed, No. 115 is given the greatest chance of being on the ballot. It is important to the oil industry in that it would increase the tax on fuel oil to half a cent a gallon, as compared with the present tax of a quarter of a cent.

This initiative, which goes under the title of "Stevenson's Old Age Pension Bill" supersedes the original bill No. 103. It is designed to provide a pension of not to exceed $100 per month for all persons totally blind, disabled or over 60 years of age, not gainfully employed or possessing real property of an assessed valuation not exceeding $3000, personal property of $1500, and an income of under $100 per month.

This initiative will impose new and additional taxes which are expected to raise $18,256,000 annually. These taxes will be levied solely for raising the pension fund and cost of administering the act and will be in addition to all taxes levied for other purposes.

Principal sources of revenue will be increased as follows:

Business and Occupation tax	$14,160,000
Fuel Oil Tax, doubled	1,025,000
Inheritance Tax	900,000
Admissions Tax, doubled	700,000
Public Utilities Tax, increased one quarter	634,000
Proprietary medicines, toilet articles and cosmetics	460,000

It is estimated there are 159,033 people in the state of Washington over 60 years of age, of which the Tax Commission estimates 95,420 are eligible for pensions under this act. There is no estimate of how many blind and disabled people are under the age limit but eligible for the pension. To pay the amount provided in this initiative would require, it is estimated, a fund of $10,000,000 per month, or $120,000,000 per year, instead of the $18,256,000 provided in the bill. The Washington Tax Commission estimates the bill, as it is drawn up, would provide only $13.77 per month instead of the $100 promised.

Initiative No. 116 is another measure that many believe has an excellent chance of receiving the endorsement to place it on the November ballot. It is essentially a gas-tax diversion bill, and provides for a local improvement revolving fund to be set up into which state treasurer would pay half a cent

on each gallon of gasoline sold in the state.

A proportionate part of the revenue would go to pay the cost of collection, administration and refunds, the rest to go to incorporated cities and towns. Funds derived from this bill would be used to retire Improvement District Warrants or Bonds issued, or which may be issued for condemnation of right-of-way, construction or maintenance or may be used to acquire, sell, lease, or operate real property against which there are outstanding local improvement bonds.

It is indicated that the result of this would be to place more than $25,000,000 of past-due, defaulted bonds and warrants on the highway fund and make this fund liable for untold millions of similar charges in the future. The anticipation is that the bill would divert approximately $2,400,000 annually.

A "Production for Use" bill has been filed under the sponsorship of the Washington Commonwealth Federation, as initiative No. 117. By this measure the state would enter the manufacturing business and food distribution through stores organized and run with money derived from an 8-mill general tax levy.

Employes would be recruited from the unemployed "at standard union scale of wages" with full rights to organize unions, bargain collectively and strike if necessary. Confiscation of property is not advocated, but "retail stores refusing to handle the goods produced under this law are faced with the probability of the state establishing a store across the street in direct competition. The measure is not likely to get on the ballot, in the opinion of most authorities.

Not to be outdone by her neighbor to the north, Oregon is fostering two initiatives which would directly affect the oil industry. To be placed on the November ballot in this state, an initiative must be signed by 16,371 qualified voters by July 31.

One measure, which it is believed will receive a sufficient number of signatures to be placed on the ballot, goes under the title of "Annual Graduated Store License Tax Bill." Under provisions of this chain store initiative service stations would come under the classification of a chain where any form of control was exercised.

It would require all stores to take out an annual license with the fees to be assessed upon a graduated scale. The application filing fee for each store would be 50 cents and the annual license fee for one or more stores under the same management, supervision, ownership, operation or control would be as follows: one store $2; additional over one, not over five $10 each; additional over five, not over ten, $25 each; additional over ten, not over fifteen $50 each; additional over fifteen, not over twenty, $100 each; additional over twenty, not over thirty, $250 each; additional over thirty, not over fifty, $500 each, additional over fifty stores, $750 each.

The second initiative affecting the oil industry is advanced as an act to prohibit monopolies and to regulate the sale of motor fuel and provides for suits in equity to prevent and restrain violations and to provide a penalty for violations.

It would make it unlawful for any person, firm or corporation to enter into any agreement, pool or combination the object of which would be:

A. To prevent or interfere with free and unrestricted competition in the manufacture, transportation, production or sale of motor fuel.

B. To fix or establish a standard price or figure for the purchase or sale of motor fuel intended for sale or use within the state, so that the price would be in anyway increased or controlled.

C. To bind themselves not to sell, or transport motor fuel within the state below a common standard figure or fixed price, or to keep the price at a fixed or graduated figure, or in any manner to establish or settle the price of the commodity between themselves and others, so as to directly or indirectly prevent free and unrestricted competition.

It is further declared against public policy as tending to create a monopoly, and therefore unlawful, for any firm, copartnership, person or corporation to sell or distribute motor fuel at both wholesale and retail in the state of Oregon.

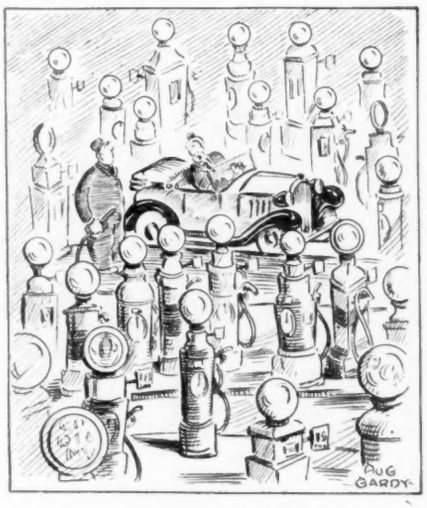
To eliminate any loop-holes, other sections of the bill reiterate that provisions make it illegal to engage in business for the sale of motor fuel within the state, for the purposes of making sales both at wholesale and retail and that no person or firm engaged in selling at wholesale can engage in selling at retail.

For the purpose of this act, the sale or consignment of motor fuel in quantities of not less than 100 gallons at one and the same time or the sale of motor fuel to a dealer for resale, is considered to constitute selling at wholesale; provided, however, that any sale to a consumer, irrespective of the amount, shall be considered as at retail.

Another section of the act makes it unlawful for any person selling motor fuel in the state, to own or control directly or indirectly the whole or any part of the stock or other share capital of a corporation or association, either foreign or domestic, engaged in selling motor fuel at retail in the state.

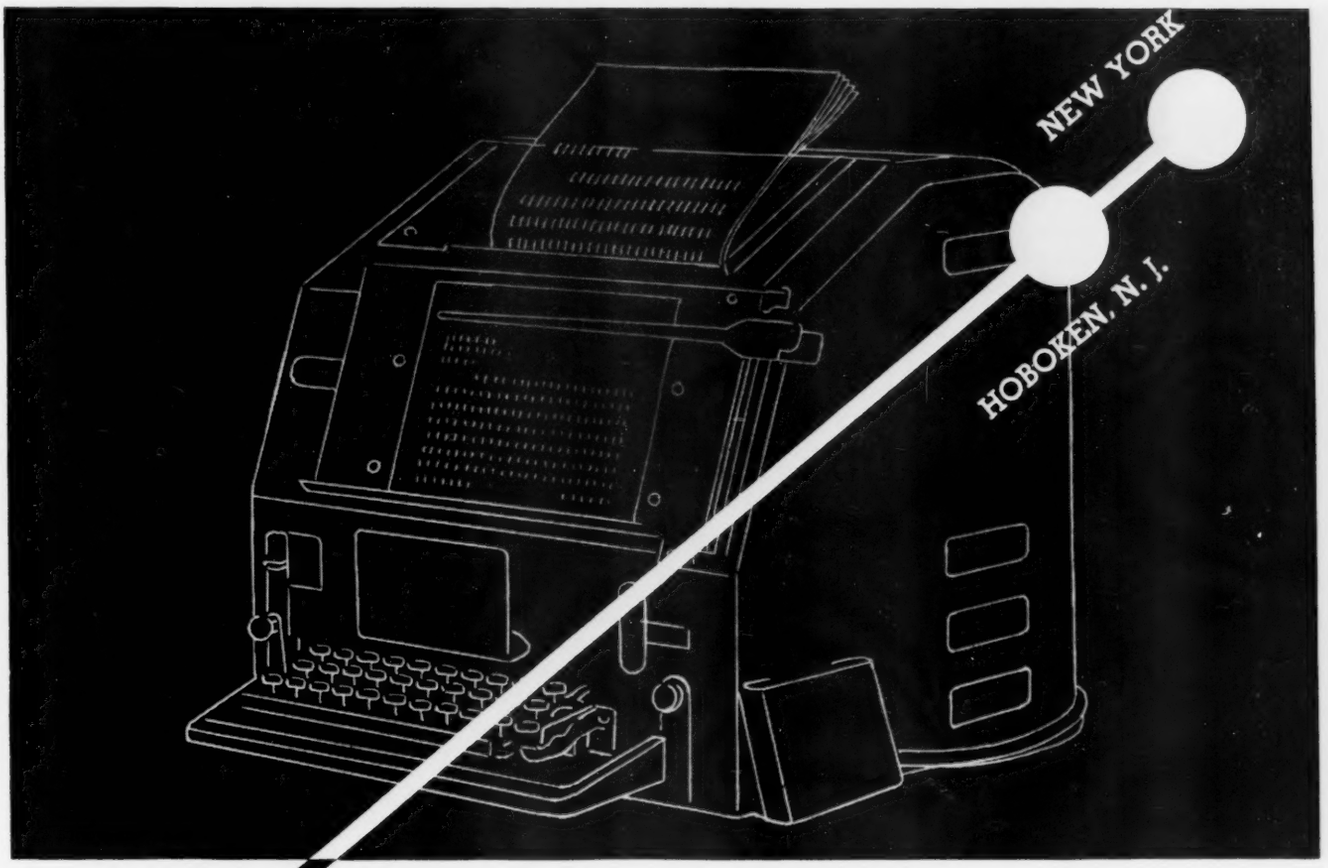
Penalties for violation of any of the provisions of this act would consist of a fine of not to exceed $5,000 or by imprisonment in the county jail not to exceed one year, or by both. Convictions under this section would not be a bar to prosecution of a suit in equity.

"Now—How Do I Get Out?"



The Esso Dealer—Standard Oil Co. of New Jersey

BELL SYSTEM SURVEY DEVELOPS 4 IMPORTANT OPERATING ECONOMIES FOR AMERICAN COMMERCIAL ALCOHOL CORP.



THE American Commercial Alcohol Corporation recently installed private line teletypewriter service (typing-by-wire) between its New York headquarters, Hoboken warehouse, and Pekin, Illinois, plant as the result of a joint survey by company executives and Bell System representatives.

Now, special order forms and invoices, typed once at any office, are instantly reproduced at all three. All offices can function almost as if they were under the same roof. In addition, these four specific advantages resulted.

1. Order forms were combined, simplified, and the number reduced from five to three. Faster, easier handling and simultaneous preparation at all points virtually ended errors.

2. The multi-copy feature of the service made it possible to cut the number of order-writing operations from eight to three — with a consequent saving of $500 a month.

3. Billing was speeded up by two to four days. Serious customer complaints on delayed invoices were eliminated. Earlier remittances save more than $500 monthly interest charge.

4. Accounts-receivable figures were brought up to the minute, instead of being three or four days late, and the monthly savings made possible by the service more than offset its cost.

★ Experienced Bell System representatives will carefully review your business with you to see whether operating economies or improvements can be effected by modern communication methods. No charge. Call the Business Office of your local telephone company.

Republic Oil Exhibit Records Oil History in Murals

PITTSBURGH, May 21

MURALS tracing the uses of petroleum from the earliest times to the present day form the permanent oil exhibit of the Republic Oil Co. here. The exhibit, educational in purpose, was opened May 8 in a special room devoted to it at the company's offices in the Benedum-Trees Bldg.

Created by honor girl-graduates of Carnegie Tech Art School, these murals show how petroleum has oiled the paths of civilization through the centuries, from the time of the flowing-robed and bewhiskered Babylonians to the overalled workers of modern industry. They show how these ancients used oil in religious ceremonies, in healing, and even for practical purposes. The walls of Babylon were built with an oil and mortar mixture. Its streets were paved with asphalt and the Egyptians, adept in the art of preserving bodies for innumerable centuries, did so with the help of oil.

Contrasted to these ancient uses in an unhurried day are the murals depicting the lively tempo of the modern scene. There is the factory, bristling with activity, whose machinery is kept whirring on oil; streams of motor vehicles and ocean lines powered with oil; Diesel-engined streamlined trains thundering at super speeds; airplanes and dirigibles crashing through the skies; and tankers, barges and ocean-going vessels supplying marine terminals of oil companies from refinery and production source to keep a mechanized world moving.

THERE are replicas and paintings of the Drake well, visualizing the commercial beginning of the petroleum industry. Maps, photographs and working models show how oil is produced, refined, transported and distributed.

Miniature scaled models of a refinery, a steel derrick, ocean tankers, pipelines and tank cars and the tools and equipment of the wholesale and retail marketing divisions are all there to illustrate the operation of their respective branches of the industry.

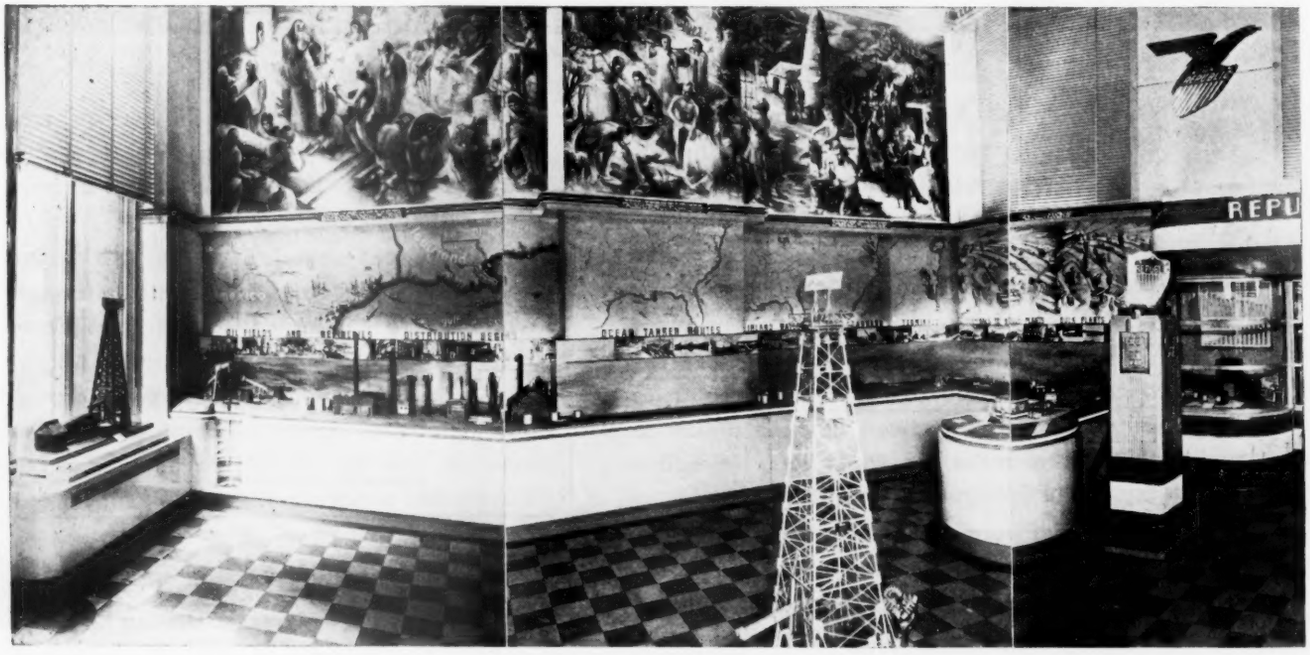
The exhibit is so arranged that each operation of the industry follows in logical sequence, making it readily understandable to the lay public.

The murals depicting ancient-day uses surmount the upper walls, while the modern petroleum industry is pictured on the lower walls. On a counter, running along the wall, are the working models of the various branches of the industry, placed directly underneath the particular branch depicted in the murals. These are the working models of derricks and pump, refineries, ocean tanker routes, inland waterways and marine terminals, and bulk and service station.

The exhibit was executed under the direction of A. V. Crouch, advertising manager.

Three girls, honor graduates from the Department of Painting and Design at Carnegie Tech., spent seven months in creating the murals. They are the Misses Maxine Piekarski, June Fuhs and Madolin Vautrinot.

O. D. Robinson, president of the Republic company, has sent letters to schools, colleges and civic clubs and organizations, inviting their members to see this "story of oil" exhibit when in Pittsburgh.



Composite photograph showing part of Republic's new exhibit at its Pittsburgh general offices

State, County and City All Put Heavy Tax Burden on Oil in Alabama

By WARREN C. PLATT
Editor

BIRMINGHAM, Ala.

IF YOU want to see to what lengths the gentle art of taxing an industry can be carried, come to Alabama and look at your own industry—oil.

If the Alabama officeholders have overlooked an idea for a tax, or an activity to exact tribute from the oil industry, the writer at present is unable to name it and this after a careful study of the taxing art as practiced here and a better knowledge of oil industry activities than the office holders have. About all that is left for the taxing authorities to do now is to raise all the taxes and licenses fees, unless they want to go in for levying a tax on an oil man for every child his wife bears him, or every time he kisses her, or for every time he shaves or brushes his teeth.

It will have to be a tax on some personal habit or custom like these because the activities of the industry have all been covered. The state, 8 counties and 143 cities and towns have fastened their tax collecting fingers on the oil man's purse for total taxes in some places of 11 cents a gallon on gasoline, and in addition they have pounced on the industry for the privilege of doing business, of having gasoline pumps, of not only selling tires but of vulcanizing them, of repairing and selling batteries, for storing cars in a building, for storing them outside and even for washing them. And this is in addition to all the usual taxes that every one else pays.

It is conservatively estimated that 80 per cent of ALL the taxes collected within the state, of every kind whatsoever, real estate etc., are paid by the oil and automotive industries, taking the state as a whole. In the cities alone, where the real estate taxes would bulk more than in the country, at least 25 per cent of all the taxes are estimated to be paid by these industries. These figures are given by Earl Hearne, secretary of the Alabama Petroleum Industries Committee who has been working on the gasoline tax situation here since the start of the oil industry's campaign and prior to that was secretary of the state code committee so his testimony as an expert is entitled to serious consideration.

The way in which the oil industry has been singled out to carry the tax load is truly alarming. The answer of course is that in the estimation of the political officeholders there is no other industry that is so strong and yet that has relatively so few people in it in the state. To levy such taxes on cotton would be unthinkable. A protest would chorus from every acre of land all over the state. The iron and steel industry has its troubles but it is mostly located in and around one city —Birmingham. The lumber and turpentine businesses are those of the natives and landowners and they are not in such good shape today anyway.

But the oil industry is a wealthy foreigner and for some reason the tremendous number of one- and two-gallon buyers of gasoline do not seem to realize that they are paying a most important part of all this extra burden. There is probably a far larger number of people of less than average income here in this state and the overwhelming number of negroes emphasizes that statement. A smaller percentage of poor whites and the negroes will have more cars here than elsewhere, but most of those who do own cars are quite hard up.

You see few farm houses—they generally are loose board shacks—out in the country without a garage, or even a car standing in the open. These people will give their last two-bits or four-bits for a gallon or two gallons of gasoline and do not realize that they could get just twice as much if it were not for these excessive state and local taxes. One reason why the trackside station and the cut price third grade operator have flourished so in the south is because of the poor financial condition of the great majority of the people. In the cities where there is at least a larger number, if not even a much larger percentage, of better-off people the low price operators do not do so well.

Oil companies handling premium, regular and third grade brands say that in the cities their third grade gasoline sales will run less than 20 per cent of the total. Which means that the trackside operators get most of the poor trade, the big companies get some but also all of the higher priced trade, which means also more than 95 per cent probably of the trade that can afford higher priced grades.

The burden of these gasoline and oil and oil industry taxes therefore falls particularly heavily on the poor man who can least afford it, the poor man who is in the great majority of gasoline customers. To understand this one need only stand around a low priced operator's filling station for a while. Seldom do any of the better makes of cars drive up and not many that are well maintained come. They are nearly all poor cars, most of them navigating with difficulty, their occupants without coats or ties—people who very evidently are having a

hard time keeping alive and probably a lot of them on relief.

On Sunday afternoon the negroes will turn out with ramshackle cars packed and drive around and around. At the start one darkey will hand over a quarter for a gallon of gas and they will drive a dozen miles and then pull up maybe at the same station and another darkey will fork over another quarter—probably his last—and then will drive some more. This joy riding will end when the quarters are gone or a tire quits service. Many a crowd will spend most of the afternoon by the roadside trying to patch a useless tire or make the old engine go.

What a burden the gas and oil taxes are on these people does not seem to bother the authorities so long as they can get the money to spend. The South is spending most of its tax money on roads and streets but it also is spending a large amount for general government, for schools and in many places it is pledged to pay off bonds.

Alabama government authorities have the same weakness as those elsewhere, of wanting to spend all the money they can collect and mortgage the future beside. There probably is no more grafting or "commissions" or "legal fees" down here than anywhere else in the country. It is generally acknowledged that one reason why the gasoline taxes have been so high for road building purposes is because the custom has been general of political officeholders and party leaders participating in the handling of all these thousand of millions of dollars with profit to themselves and their friends.

The South is no better nor worse than anywhere else. Back of the incentive to create and handle large sums of money is the age-old fact that it is easier to spend some one else's money than it is your own. However the cities and towns down here do not look as if they have benefited so much from all the money taken from the oil business, the money in fact having gone to pay expenses that should have been taken care of by general taxes.

What makes the oil industry's tax situation here particularly bad is that by state law all counties on the order of the probate judge can collect half as much again of the state's privilege taxes. However this does not apply to the state's gasoline tax. Counties may levy gasoline taxes by "local" legislative acts in unlimited amounts. Counties also get 3 cents of the 6-cent state gasoline tax. Also municipalities under a broad interpretation of the state constitution can levy in addition the same special and license taxes as the state.

On top of this it is the custom in both houses of the state legislature that all bills that pertain solely to a single county, particularly for raising more taxes, will not be objected to by any other member of the legislature. The result is a dozen or more of these bills will be assembled by the clerk, read by title only and approved, without action of any committee or being read before the legislature. Furthermore the clerk in calling the roll will call the first and the last names on the roster of the house and senate and the presiding officer will declare the bills approved.

THIS omnibus way of levying taxes and passing measures that are local to a single county makes it impossible, at least most difficult, for an industry when thus singled out by a single county, to put up a successful fight. No member will take part in such a fight because he wants the same privilege of putting something over in his county without the scrutiny of any other member.

To try and protect itself from this dangerous situation the oil industry is making a fight for a constitutional amendment which will provide for a uniform gasoline tax all over the state, half to go to the counties for road expenditure, and to forbid the counties and municipalities levying any special taxes on petroleum products. The industry plans a big fight for this at a future session of the legislature.

This winter's special session of the legislature saw a group of conservatives from the cities block the efforts of the county members and the governor to levy a general sales tax, and to increase present taxes. The conservative group was just strong enough to block but not to put over its program of reduction of state expenses. This group even stopped appropriations for the unemployed on the ground that the governor should find the money from the present income of the state.

Here is a brief summary of the taxes on the gasoline and oil business in Alabama:

The history of the state gasoline tax is—

1923—2 cents a gallon gas tax for all 67 counties in equal shares for roads.

1927—2 cents additional (total 4 cents) to retire state road bond issue.

1931—1 cent additional (total 5 cents) for the state highway department but the counties took it after first year.

1932—1 cent additional (total 6 cents) for state highway department for maintenance and repairs and to match federal funds.

Today the state takes of the 6-cent tax, 1 cent for bond retirement and 2 cents for maintenance. The counties are mostly in the federal three-way program but the county of Cherokee is authorized to use 10 per cent of the tax for general purposes by reason of local legislation on its behalf.

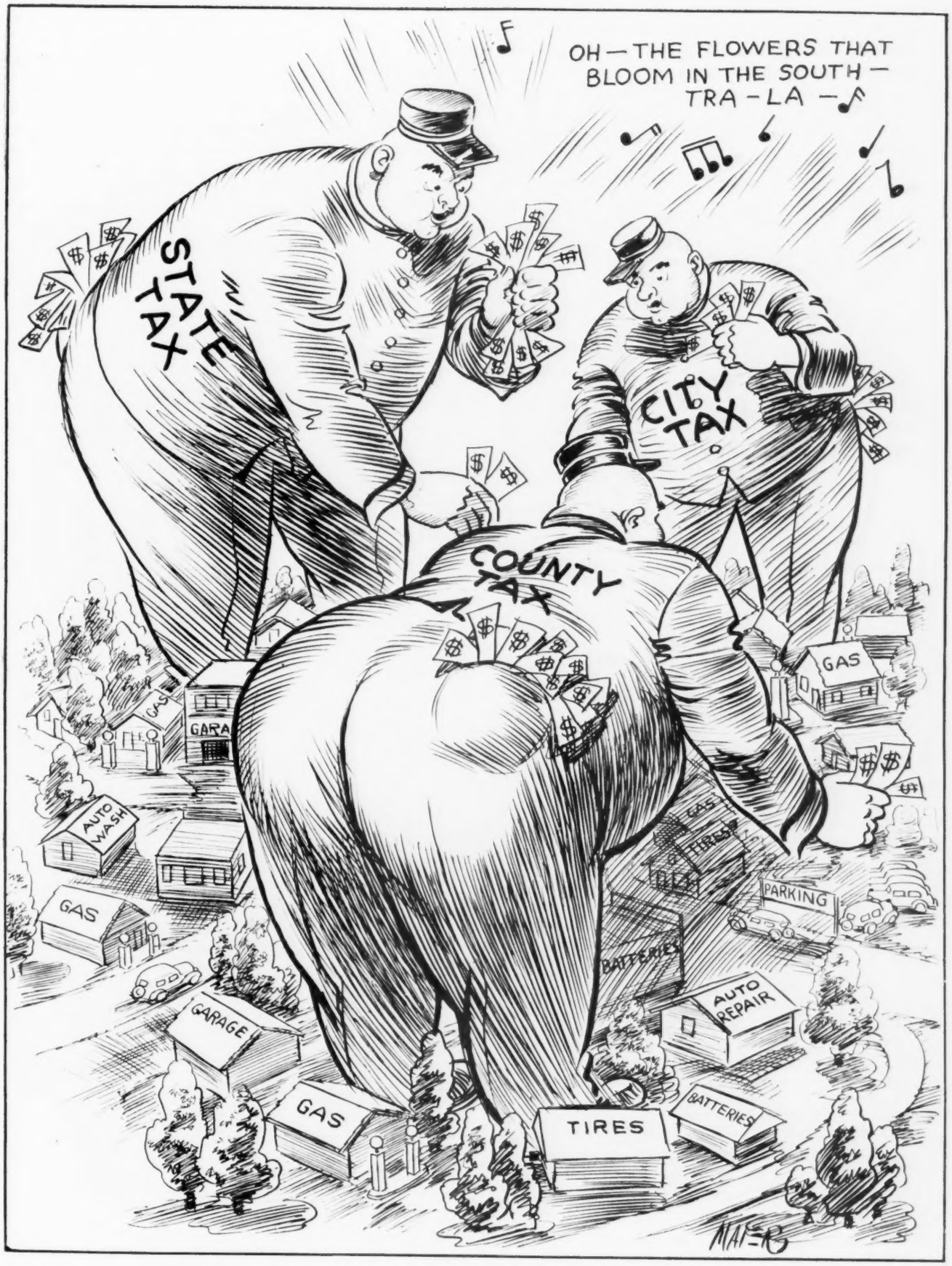
The total gasoline tax of 6 cents produced in 1935 $10,-800,000.

In addition to the tax on gasoline the state taxes lubricating oils at 2 cents per gallon, figuring grease in as oil on the basis of 8 pounds per gallon. This tax last year brought the state $160,000. This tax is collected from the wholesaler and the proceeds go to the general fund.

State Wholesale License Taxes

For conducting a wholesale business in illuminating, lubricating and fuel oils, in sales of 25 gallons or more, ½ of 1 per cent.

For conducting filling stations (this is state license separate from any county or city license) rate is based on population. In Birmingham the rate is $40 for the first pump and $30 for all others. It grades down



In Alabama, every shop that serves the automobile is considered particularly good picking by these heavy handed gentlemen

to $2.50 for a pump in the country.

State license for the sale of tires and accessories $40 for the largest city down to $5 in the country. Stations carrying stocks of not more than $75 wholesale value are exempted. This was obtained for the small stations by the oil companies.

State license for the privilege of retreading tires, $20 flat.

State license for repairing, recharging and selling batteries, $20 in the larger cities down to $5 in the small ones.

State license for operating a storage garage in a building $2 for each 1000 square feet or any part thereof up to 50,000 square feet and $1 for each 1000 square feet above that.

State license for operating a parking lot $1 for each 1000 square feet.

The same truck license fees as apply on all trucks.

On all the above oil taxes the counties can collect 50 per cent more in addition and they all do, except on the "wholesale business" license.

The state also operates an oil

Municipal and County Local Gasoline Taxes for State of Alabama
April 15, 1936

State Tax.....6c Per Gallon

County Gasoline Taxes

County	Rate of Tax per Gallon	Purpose for which Tax is used
Jackson	3c (1c to Scottsboro)	Roads
Limestone	3 To be voted on Nov. 3, 1936	Roads
Madison	3	Roads
Montgomery	1	Schools
Pickens	1	Roads
Randolph	3 (Tax never levied) Local act Authorizing	
Crenshaw	1 (Tax never levied) Local act Authorizing	
Tuscaloosa	1	Roads

City and Town Gasoline Taxes

(Note: T-Town; C-City; PJ-Police Jurisdiction, 3 miles as the crow flies, from city limits)

Municipality	Gasoline Tax City	Gasoline Tax P.J.	Kerosene Tax City	Kerosene Tax P.J.	Lube Oil Tax City	Lube Oil Tax P.J.	Purpose for which Tax is used
Abbeville-T	1c	1c	½c	½c			
Akron-T	1	½					
Albertville-T	1	½	½	¼			Streets-Fire Dept.
Alexander City	1		1				
Altoona-T	1	1					
Andalusia-T	1 ½	¾	1	½			Schools
Anniston-C	1	½					Streets, Bridges, City Bonds
Ariton-T	1	½	½	¼			
Ashland-T	1						
Atmore-T	1	½					
Attalla-T	2	1					
Auburn-T	2	1					General Fund
Austinville-T	1	½					
Bay Minette-T	1	½					General Fund
Bessemer-C	1	½					
Birmingham-C	1	½					General Fund
Boaz-T	1	½	½	¼			Streets
Brantley-T	2	1	1	½			
Brewton-C	1	½	1	½			
Brighton-T	1	½					
Brundidge-T	1	½					General Fund
Cam. Hill-T	1	1					Streets
Cherokee-T	2	1					
Childersburg-T	1	½					Streets
Citronelle-T	2	1					
Clio-T	1	1					
Collinsville-T	1	½	½	½			
Columbia-T	1	½					
Columbiana-T	1	½					
Cottonwood	1 (storage)	1					
Courtland-T	1	½					General Fund
Cullman-C	1	1					Streets
Dadeville-T	1	1	½	½			Streets
Decatur-T	2	1					General Fund
Demopolis-T	2	1					
Dothan-C	1	(storage)	1	1	5c	5c	
East Brewton-T	1	1					General Fund
Electric-T	1						
Elba-T	2	1					
Enterprise-T	1	1					General Fund
Eufaula-T	1	(storage)	½	(storage)			General Fund
Eutaw-T	1	1					Streets
Fairfield-T	1	½					Streets
Faulkville-T	⅛						General Fund
Flomaton-T	1	1					
Florala-C	1 ½	¾	1	½			
Florence-T	2	1					General Fund
Foley-T	1						
Fort Deposit-T	1	1	½	½			
Fort Payne-T	1	1	½	½			General Fund
Frisco City-T	1	½					
Gadsden-C	2	1					
Geneva-T	1	½					
Georgiana-T	1	½					
Glenwood-T	1						Schools
Geneva	1	½					
Goodwater-T	1	½					
Goshen-T	1						
Greensboro-T	1	½					
Greenville-C	2	1	1	½			
Guntersville-T	1	½					Streets
Hackleburg-T	1	½	½	¼			Streets
Hamilton-T	1				1		
Hanceville-T	1	1					General Fund
Hartselle-T	1	½					
Headland-T	1	½					
Hodges-T	1	½					
Homewood-C	1	½					
Hurtsboro-T	1						
Irondale-T	1	½					
Jacksonville-T	1	½					
Jackson-T	1	½					
Kennedy-T	2						
Kinston-T	1						Schools
LaFayette-T	1	½					Streets
Leeds-T	1	½					Streets, Bridges
Lanett-T	2	1					
Leighton-T	1						General Fund
Linden-T	1	½					Streets
Lineville-T	1	½					General Fund
Lipscomb-T	1	½					
Louisville-T	1	½					
Luverne-T	1 (storage)						Schools
Marion-T	1	½					Streets
McKenzie-T	½	¼	1	½	5	5	Schools
Mobile-C	2	1					Streets & Genera
Monroeville-T	1	½					
Montgomery-C	1	½	1	½			General Fund
Montevallo-T	1	½					
Moulton-T	1	½					
Muscle Shoals-T	1	½					
New Brocton-T	1	½					Schools
Notasulga-T	1						
Oneonta-T	1	½					Streets
Opelika-T	1	½					Streets
Opp-C	1	1	1	1			Schools
Oxford-T	1	½					Streets
Ozark-T	2	2	1	1			General Fund
Pell City-T	1						Streets
Petry-T	1						
Phenix City	1	½					
Phil Campbell-T	1	½					General Fund
Piedmont-T	1	½					Streets
Prattville-T	1	½	½	⅛			General Fund
Pollard-T	1	1					
Prichard-T	1	½					
Ragland-T	1	1					General Fund
Red Bay-T	1	1					Schools
Red Level-T	1	½	½	¼			
River Falls-T	1						
Roanoke-T	1	½					General Fund
Robertsdale-T	1		1				
Russellville-T	2	1					General Fund
Selma-C	2	2					Gen. Fund-Charity
Sheffield-C	2	2					
Silver Hill-T	1						Streets
Springville-T	1	½					
Steppeville-T	1	1					Streets
Sulligent-T	1	½					Streets
Summerdale-T	1						
Sylacauga-C	1						Streets
Talladega-C	2	1	1 temporary				General Fund
Tarrant City-C	1	½					
Thomasville-T	1	½					Schools
Town Creek-T	2	1					
Troy-C	1	½	1	⅛			
Tuscumbia-C	2	1					
Tuskegee-C	1	½					Streets
Union Springs-T	2	1					
Uniontown-T	1	½					Streets
Valley Head-T	1	½	½	¼			Streets
Vernon-T	1	½					Schools
Vina-T	1	½	½	¼			
Wadley-T	1	½					Streets
Walnut Grove-T	1	½					
Warrior-T	1	½					
Waverly-T	1						
Wetumpka-T	1	½	½				
Wilsonville-T	1	½					
Wilton-T	1	½					
Total No. of Taxes	143		29		3		

"inspection" department that charges 1/40 of 1 cent a gallon on gasoline and 0.5 cent a gallon on kerosine.

Oil Industry Taxes in the City of Birmingham

City wholesale tax of 0.3 per cent on gross sales of gasoline in addition to the state and county tax. This amounts to more than $3000 for the larger companies. The state supreme court has held it is legal to tax the gasoline tax because it says the rate of the wholesale license tax is merely a measuring stick. Birmingham's gasoline consumption now is running about 23,000,000 gallons a year.

City gasoline station tax—$50 a year minimum.

City washing and greasing tax—$18 a year.

City tire and accessory tax—$100 a year.

City car storage tax—$15 a year.

City battery charging tax—$30 a year.

The lessee of the station pays all the above taxes.

In the smaller towns the wholesaling tax runs from $750 down to $25 a year in towns of 300 population. Pump licenses in other towns scale down to $5 per pump the lowest tax.

Some of these taxes the oil industry has only the Standard of the old days to blame because 20 years and more ago some of its officers and agents the country over, not just in the South, thought that it was smart to put obstacles in the way of competition and they proposed and got passed excessive taxes which would keep Independent competitors out of towns and keep them from growing.

Every once in a while a member of a council or legislature whose experience goes back to those days will throw that up to the men representing the oil industry who are fighting taxes today. Those were the same officers whose conduct of the old Standard was such that the United States government found it necessary to dissolve the old company. Needless to say all those old boys are dead or out of office and the new crowd are as much against unfair taxes and inequitable laws as their competitors.

Every once in a while also those fighting taxes and restrictive legislation will find where some smart equipment salesman is trying to get legislation that will make his equipment necessary. One turned up at the small town of Opp here in Alabama not long ago and got an ordinance proposed that would have required meters at all service stations so as to help the town in collecting its local gasoline tax. The oil industry's representatives promptly notified his employer that that was no way to sell meters.

With all these many taxes there is reported to be quite a bit of tax evasion of one kind and another. Tax collecting in some places especially with friends, is not the most efficient form of government. Also there are many ways of getting around the tax by getting just outside of a tax zone. This is quite common where there are city and county taxes. Those outside the zones profit exceedingly.

In Jackson county some years ago one third of the gasoline stations closed when people could buy 3 cents per gallon cheaper outside of the county.

In Limestone county, on the Tennessee line, through which passes the main road from Birmingham to Nashville, gasoline gallonage dropped off more than 25 per cent when the tax made prices unequal.

In Pickens county 6 of the 7 larger companies two years ago showed an increase of 11.2 per cent for the two months the county's 2 cent tax was taken off. This county today collects 2 cents county tax while the four towns there collect another 1 cent each making the total gas tax in the county 9 cents and in the towns 10 cents.

In Birmingham in February 1934, the gas tax was increased

for two weeks only from 1 cent to 2 cents a gallon and a lubricating tax was levied of 8 cents a gallon for the same period. The heaviest losers were the service stations on the edge of town who lost 75 per cent of their business. Even in the heart of the city the stations lost 10 per cent. The average up-town loss per station was 29 per cent and of the outlying stations 35 per cent. These figures are from actual checks of gallonage.

At the same time the total state increase in gallonage for that month was 14.66 per cent over the month before. Despite that, the collections under the 2-cent tax as against the previous 1 cent tax in the city, fell 13.71 per cent. The resulting uproar caused the tax to be reduced to 1 cent.

At Montgomery, the state capital, the city 1 cent tax plus the 1-cent county tax have prompted one trackside company to put its bulk and service stations just outside the county limits. It is doing six times the business it would do on an equal price basis. At Dothan three companies moved their bulk plants out of town because of a 1-cent storage tax on gasoline, a 5-cent tax on lubricating oil and 1 cent on kerosine.

The last legislative session saw 12 bills introduced to divert the gasoline tax to general government purposes but they were all defeated. The chain store tax exempts filling stations and bulk plants and efforts to increase truck license taxes up to 700 per cent were defeated.

At the present time seven counties are assessing their own gasoline taxes three of them of 3 cents each, and two counties have the legal authority to assess such taxes but have not levied them yet. Of the 140 cities and towns that levy a gasoline tax 19 take 2 cents and two, 1½ cents; 29 towns tax kerosine from ½ to 1 cent a gallon and 3 lubricating oil two of them 5 cents a gallon.

New Tax and Diversions Killed in Alabama

DEFEAT of all measures save two small local bills for the diversion of gasoline taxes saved $3,500,000 from being diverted from the Alabama highway funds during a recent special session of the legislature, called for the express purpose of raising approximately $10,000,000 additional revenue for school purposes and homestead exemptions, according to a report of Secretary E. M. Hearne of the Alabama Petroleum Industries Committee.

The principal efforts of this committee were directed toward the prevention of the enactment of several gasoline tax diversion measures. The local bills were passed early in the session before complete arrangements to kill "local bills" of this nature were made in the Senate. Their passage was the result of a custom of "senatorial courtesy." Passage of more bills of this type was stopped by the adoption of a resolution in the Senate calling on the Senate as a body to consider all gasoline tax diversion bills as bills affecting the entire state.

The committee recommended that closer unity and more active co-operation be developed through the reorganization of the present County Motorists Tax Relief Associations. Plans for this reorganization are being perfected and actual work of reorganization is to start during May.

As a result of this reorganization it is expected that it will not be necessary for the industry to oppose unfair or detrimental legislation, but rather that the industry may be in a position to sponsor favorable legislation.

The committee was also instrumental during the session in offsetting agitation of the Highway Department to pass an additional cent per gallon gasoline tax for the purpose of matching federal aid road funds. This was done by calling on county organizations to contact their representatives and senators in as large numbers as possible. The proposal was abandoned and no legislation was introduced.

Inasmuch as the "Economy Bloc" was able to defeat all tax proposals and the Senate defeated economy measures it is considered likely there will be another special session during the present year. Appropriations are still about $4,500,000 in excess of state revenues.

Spencer Lists Reasons For Swing to Oil

CHICAGO, May 15. — There are ten outstanding reasons for the swing to oil heating equipment, which are revealed by rising sales in the Chicago area, according to Frank E. Spencer, Spencer Petroleum Co., and chairman of the Chicago Oil Heat Committee.

Dependability - Comfort - Cleanliness - Quietness in Operation - Safety - Long Life - Freedom from Attention - Compactness of Units - Ease of Service - and Economy, were the reasons cited by Mr. Spencer.

"In addition to these features, the modern oil burner is an unusually attractive looking heating unit," Mr. Spencer continued. "Particular attention has been paid to the design. It is modern because it is operated in a modern setting, following the trend toward modernization of basements and the increase in the use of this part of the home for recreation purposes.

"Many who have not used oil as a fuel do not realize that recent advances in design in the unit make it possible, too, to burn low-cost fuel oil, effecting a marked saving in fuel bills.

"A recent survey of the industry in Chicago," he said, "reveals that the trend of oil burner sales is decidedly upward. Figures for nation-wide sales as well show a big increase—20 to 25 per cent over the same months of last year."

Results of Marketing Department Bonus Plan of Continental Oil Co.

1. Cut off Unprofitable Gallonage

2. Increased Sales of House Brand

3. Boosted Premium Oil Sales 14%

4. Added Over $2,000,000 to Profits

By ALLEN S. JAMES
N. P. N. Staff Writer

THIRTY million gallons of business were discarded deliberately by the Continental Oil Co. in 1935 because its marketing department could foresee little possibility of a profit by retaining it.

Before you chuckle up your sleeve and have that "Oh, Yeah? It's their alibi for losing the business to someone else" thought, consider these three facts.

1. Sales of the company's house brand gasoline increased 3.79 per cent in 1935, as compared with 1934.

2. The company's premium motor oil sales were 14.06 per cent higher in the same period.

3. The marketing department turned in $2,284,300.38 more profit last year than in 1934.

Behind those three facts is a real story of progressive marketing; the story of how a company's sales officials ceased striving for quantity sales records and began pressing for more sales of profitable gallons; of the careful explanations that went out to the division men when this reversal of usual oil company marketing policy was undertaken; finally the story of a bonus plan that enabled the men to forget the old gallonage-at-any-cost training and work for extra compensation if they did a good job of recording their year's business with black ink.

When Continental's officials decided that 1935 would be devoted to a marketing program centered on improving marketing methods to the exclusion of expansion, the marketing department, at the beginning of the year, made a careful analysis of sales.

This analysis revealed that the company had some business which even under normal retail marketing conditions, hung right on the line dividing the profit and loss sides of the ledger. Abnormally high retail markets would permit realization of a small margin of profit; sub-normal markets would throw the business decidedly into the red ink column. The business was not so located geographically that the company could supply the gallonage from any of its refineries without facing a decided freight disadvantage.

That business was discarded. The company simply passed up business that was not profitable and centered sales effort on the branded products in which there was a profit.

However, getting back to the beginning of 1935, the marketing department executives, after they had studied their analysis of sales, instructed regional sales managers, division managers and assistant division managers to go over their territories with a fine-tooth comb to see if there had been any definitely unprofitable business overlooked when the first weeding out process had been completed.

At the same time these divi-

Table No. 2

Showing How the Bonus Would be Divided, Assuming a Division Had Net Earnings of $180,000 and Had Won the Percentage Awards by at Least a 10 Per Cent Increase in Gallonage Sales of House Brand and Premium Gasoline, and Premium Motor Oil.

The Bonus

Base Bonus ($180,000 x 3%)	$5400.00
Gasoline Sales Award ($5400 x 5%)	270.00
Motor Oil Sales Award ($5400 x 10%)	540.00
Total Bonus for Division	$6210.00

How It Would Be Divided

General Office Staff (15%)	$ 931.50
Regional Sales Manager (10%)	621.00
Division Manager (25%)	1552.50
Three Assistant Division Managers (50% to divide, or $1035 each)	3105.00
	$6210.00

Table No. 1

Showing Method of Computing The Base Bonus for Each Division in Continental Oil Co.'s Marketing Department Bonus Plan.

Net Earnings for the Year	% Bonus	Base Bonus
Up to and including $50,000	4.0	$2000
From $50,000 to $100,000 inclusive	3.5	3500 (with $2000 minimum)
From $100,000 to $200,000 inclusive	3.0	6000 (with $3500 minimum)
From $200,000 to $300,000 inclusive	2.5	7500 (with $6000 minimum)
From $300,000 to $500,000 inclusive	2.0	10,000 (with $7500 minimum)
Over $500,000	1.0	12,000 (with $10,000 minimum)

sion men were instructed to weigh carefully any new business. If there was some doubt as to its proving definitely profitable in the final analysis, the order was to pass it up.

And right there the marketing department officials were treading on very dangerous ground.

Place yourself, for a moment, in the position of a division manager. The bosses in the general office had told you not to go after a lot of new business, unless you could see a profit in it. You had a perfect alibi already prepared for you by the bosses, if your division failed to improve its position, or even if it lost some ground during the year.

"I lost the business to a competitor," you could report, "because you would not let me meet his bid for the business."

If you were so inclined, you also could sit back the entire year, take it easy and tell the bosses the reason you didn't sell any more was because you were not permitted to meet competition. But the bonus plan took care of that.

Early in the year company executives announced that the marketing department would be given a bonus, each division's share to be based on a percentage of its own earnings as shown on the company's Profit and Loss Statement, but subject to certain rewards and penalties.

The method of computing the bonuses is shown in Table No. 1. It will be observed that there are six brackets for net earnings, the percentage of bonus being smaller as the net earnings totals increase. It also will be seen that, with the exception of the first bracket, a minimum bonus has been set for each bracket, this minimum being the base bonus for the next lower bracket. This was done in order to compensate for the change in percentages. Suppose, for example, a division showed net earnings of $105,000. It would fall in the third bracket, which entitled it to 3 per cent of the earnings. Three per cent of the earnings is $3,150, but note that the minimum in this bracket is $3,500. Consequently, by establishing a minimum in each bracket, there is no desire to "drop" profitable business in order to stay in a lower bracket.

IN drafting this bonus plan, however, executives did not focus their attention entirely on net earnings. They fixed the base bonuses on net earnings, true enough, but they also tied in certain penalties and rewards. The penalties were:

1. Each division that had a loss in its total gallonage sales of house brand and premium gasoline for 1935 as compared with 1934 would be penalized 10 per cent of its base bonus.

2. Each division that had a loss in its total gallonage sales of premium motor oil would be penalized 10 per cent of its base bonus.

Briefly, a division might show net earnings for the year yet still lose up to 20 per cent of the base bonus allowed on those earnings if it failed to hold its own with reference to gasoline and motor oil sales.

The rewards, on the other hand, were:

1. Each division that had at least a 10 per cent increase in its total gallonage sales of house brand and premium gasoline for 1935 as compared with 1934, would be rewarded by the addition of 5 per cent to the base bonus.

2. Each division that had at least a 10 per cent increase in its total gallonage sales of premium motor oil would be rewarded by the addition of 10 per cent to the base bonus.

Certain rules also were outlined with reference to division of the bonuses among the marketing department representatives.

Fifteen per cent of each division's bonus was to be divided among seven members of the general office staff.

Ten per cent of each division's bonus went to the regional sales manager having supervisory control over that division. There are four regional sales managers for the company's 12 divisions.

Each division manager was to receive 25 per cent of the bonus earned by his division.

The remaining 50 per cent earned by a division was to be divided between its assistant division managers, with the proviso that no assistant division manager would be permitted to receive more than 80 per cent of the amount allotted to his division manager.

An example of this bonus division is shown in Table No. 2.

Then there was some flexibility put into the plan, the paragraph containing it reading as follows:

"In some divisions, because of competitive prices, or other factors beyond the control of the personnel for whom bonus provision has been made, losses during certain years may be inevitable. At the end of each year the management will review the conditions which have prevailed in divisions who report losses or who have earnings that have been adversely affected to an abnormal extent and it will award such bonuses as may seem warranted either by reduction in losses over the preceding year, or by other results indicating a sales and managerial effort worthy of recognition."

ADVERTISING PAGE REMOVED

Sales of tires and tubes at this station in Muskogee, Okla., amount to about $10,500 a year. These sales and accessory sales account for 60 per cent of the business volume at the station

Sixty Per cent of Station's Business Is Tires, Tubes and Accessories

WHEN the bookkeeper recently completed an analysis of the business done in 1935 at the Vaughan Oil Co.'s No. 1 service station in Muskogee, Okla., he placed on the desk of A. J. Vaughan, owner, a report which showed that:

The sale of tires and tubes accounted for approximately 38 per cent of the station's gross receipts.

Accessories brought in 22 per cent of the year's business.

Gasoline, oil, lubrication and washing, and miscellaneous services made up the remaining 40 per cent.

Muskogee's population is only 33,000; it is over-run with service stations; there are two mail order and three manufacturers' tire stores there, but Vaughan's No. 1 station averaged slightly better than $2500 in gross sales per month in 1935.

The Vaughan Oil Co. was organized 11 years ago, first as a jobbing concern. Later Mr. Vaughan built his No. 1 station and became both a jobber and a retail distributor. And about four years ago he opened his No. 2 one-stop station.

The usual line of accessories —batteries, fan belts, wiper blades, light bulbs, repair kits, and so on—have been handled at both stations almost from the day they first were opened. It was not until three years ago, however, that Mr. Vaughan began handling tires and tubes.

Even then he tried the tire and tube business only at his No. 1 station. He acquired the agency for a nationally advertised tire and, despite the fact that a semi-major oil company's franchise with the same tire company caused some over-lapping in Muskogee, Mr. Vaughan managed to sell slightly more than $10,000 worth of tires and tubes the first year. His 1934 total was within $200 of the first year's amount, while the 1935 volume was approximately $10,-500.

Late in 1935 Mr. Vaughan obtained, this time for his No. 2 station, a franchise for Muskogee and surrounding counties for a second well known tire.

Why two lines of tires? "It is a lot like a woman getting married," Mr. Vaughan explained. "She gets a lot of consideration from all interested parties until she marries one of them. As long as I'm not married to one tire maker, both the ones I do business with are prone to give me more consideration and not be too dictatorial."

Mr. Vaughan is now anticipating his No. 2 station will show a gross sales volume of at least $8000 in 1936. Despite the severity of February, the station sold in excess of $700 worth of tires and tubes.

Mr. Vaughan recently added automobile paints to his accessories line at the No. 1 station.

Mr. Vaughan built shelving in the office of his No. 1 station and stocked the paints. Now he has one customer alone, an au-

tomobile painter, who buys close to $50 worth of paint a month. Several other professional painters buy smaller amounts, while his sales to individuals also have been increasing.

Mr. Vaughan buys all of his accessories either direct from the manufacturer, or through automotive supply houses. Whenever possible he buys direct from the manufacturer in order to widen his margin of profit.

The employes at the two stations have been with Mr. Vaughan for several years. He has maintained a higher wage scale, even through the depression, than the average for Muskogee. In addition he sets aside each month 5 per cent of the gross receipts from accessories of all kinds to be distributed among the employes at the two stations. This means that the three attendants and the porter at each station divide each month the 5 per cent they have earned through selling accessories.

MR. VAUGHAN spends the greater part of his time calling on "his trade" in Muskogee. He also has a young man whom he has labeled his "trouble shooter." This employe handles the advertising, collects delinquent accounts, and takes his regular turn at calling on the trade.

Despite the fact that he believes there is not a penny of profit in washing cars, Mr. Vaughan pushes that service because it gives his men an excellent opportunity to follow-up on other services and the sale of accessories.

Recently Mr. Vaughan started his "advertising special." He had 500 cards printed which carried the information that for 25 cents and one of the cards, properly signed, a regular grease job would be given. The cards were mailed out at the rate of 50 per week. Accompanying each card was a letter explaining that the offer was made in order to advertise the "bumper to bumper" service.

A careful record was kept of the cards returned. It was found that only 1 in 10 obtained merely the grease job. Sales of other services and accessories ranged from $1 up to $6.

Sells 250 Batteries and 725 Tires Yearly in City of 12,000

A LITTLE wooden box filled with battery data cards and eyes trained to spot "bald headed" tires are helping A. M. Watson of McAlester, Okla. sell close to 250 batteries and approximately 725 tires annually in a town of only 12,000 population.

Mr. Watson has been operating the super service station bearing his name for the past three years and now is selling approximately 300 gallons of gasoline for every battery sold, and 100 gallons for each tire. But tires and batteries were his first love and it is to the sale of those accessories that he devotes most of his time while the other boys at the station handle the gasoline and oil business.

Each card in the little wooden box contains a complete record of every customer's battery. When that battery is checked the first time, a card is filled out with the customer's name, the date, the mileage, the gravity reading of the battery and remarks about the condition of the battery.

A small pin button is numbered to correspond with the number of the customer's card. This button, placed usually above the windshield inside the car so the driver can see it easily, has two red numbers representing the two dates each month the battery should be inspected and serviced.

Each time a customer drives into the station, the attendant makes it a point to check the date on the button, and if it is about time for another battery inspection, that fact is called to the attention of the customer.

Mr. Watson does not rely wholly on that method. He checks through his cards every day, and those who have gone several days over their regular two weeks inspection either are called on the phone, or notified by mail.

"The battery is the blind spot for the average motorist," Mr. Watson explained, "and we try to eliminate that blind spot as much as possible. By keeping the customer informed, and by contacting him regularly, we have him virtually sold on our product and service when the time comes for him to buy a new battery."

These regular inspections also enable Mr. Watson to have the first chance to sell such accessories as battery cables and terminals when the ones on the customer's car begin to wear out.

Mr. Watson's tire sales record is the more remarkable when it is considered that he sells one of the highest priced tires on the market.

"We do not talk so much about mileage," Mr. Watson said, "but we certainly do talk about safety. We keep our eyes open and whenever we see a 'bald headed' tire go by, we make a note of the fact that 'Sam Jones' needs a new casing.

"Then Sam Jones is contacted, either by phone or personal call, and urged to drop by the place to talk about a new tire to replace that worn one.

"When we get him down here, we do not talk any more about replacing that one tire. We talk about selling him a pair, or a set. We do not want to sell tires in less than pairs.

"We point out that we can afford to give him more allowance now on his worn tires than he could get later, not to mention the additional risk and the increased likelihood of punctures and blowouts the longer he drives those worn tires. We urge him to let someone else take those risks."

Mr. Watson does a big "change over" business on new cars, despite the fact the owner of a new popular make of automobile has to dig down in his pockets for approximately $45 additional when he trades in the new tires which came on the car for a set of those Watson sells.

Control Instruments

(*Continued from page* 19)

a new integrating flowmeter, as demonstrated at the Exposition, whose claims to exactness and mathematical rectitude appear to have good basis in fact. It is essentially a large U-tube mercury manometer, mounted on knife edges and connected to the fluid line, the flow in which is to be measured. Connected to the low side of this manometer is a steel strip, to the lower end of which is a "governor" mechanism of balls also mounted on knife or similar edges.

When the fluid flow is zero, the manometer is balanced. When flow is started, pressures on the two sides of an orifice plate are unbalanced, and the manometer tips. A magnet on the low side attracts the arm of a mercury switch and closes it and an electric motor rotating the governor balls starts producing a torque in the latter. This torque is increased until the pull on the steel strip again balances the manometer, the amount of torque and therefore of pull to balance being directly proportional to the rate of flow. The speed of the motor required to produce this balancing torque, is therefore also directly proportional to the rate of flow.

Therefore, the rotational speed of the motor, properly calibrated in terms of the fluid pipe and the orifice, becomes a direct integration of the amount of fluid flowing through the pipe. The impulses from the meter are sent directly to the integrator dials mounted on the instrument board or elsewhere.

A new integrating planimeter instrument should appeal to every operator faced with the chore of determining the evaluation of recorder charts from plant instruments. Two pen-arms are passed over the chart curve record, and the integrated value is read direct from the instrument. Attachments have already been provided for three types of recorder instruments and others will doubtless be available as demand arises for them.

To eliminate the possibility of human "error" in delivery of liquids to customers, or the amount of the bill with which they are charged, a new duplicating meter was shown at the Exposition, to be installed especially on tank trucks. This is of interest to marketing executives as well as refiners. It meters the outflow to delivery and a "cash register" lever, turned after delivery is made, delivers a printed slip showing the quantity delivered to the customer. This reading cannot be affected in any manner by either deliveryman or customer, and simplifies the keeping of exact records.

A unique development, doubtless the results of demands for gas lift and repressuring operations, is a new time-cycle intermitter, operated by telechron or other clock mechanism. This instrument, each mechanism of which is operated independently of any

The tax collector "held 'em up" even at the tax exhibit of the American Petroleum Industries Committee at the Tulsa Oil Exposition. W. K. Warren, president of the Warren Petroleum Co., threw up his arms when confronted with pertinent facts displayed at the exhibit on the taxes collected on a drum of gasoline, tank of crude oil and so on. The exhibit was one of the chief attractions of the Exposition

others in a battery, turns the gas pressure on and off according to a prearranged schedule or cycle, without attention from an operator.

The demands made on the equipment manufacturer by increasingly severe conditions of cracking, polymerization and distillation methods are being met by new alloys, new weights, new refractories which were shown at the Exposition. One which will be used in the newest refinery is a new super-high-pressure tube header, for thermal polymerization and heavy duty cracking service. It is tested for a pressure of 9000 pounds. Screw plugs are used in it; tube ends are beveled on a flat angle, and are forced to a tight fit in the header by the tightening of heavy screw bolts, five being employed on each tube end with a sleeve to increase the tightness of the joint. Another smaller type of header has also been developed for application in hydrogenation units with their extremely high pressures and temperatures.

This newest refinery will also doubtless use an improved gas and oil burner under its stills and boilers. This burner uses a system of adjustable baffles and sliding air inlet mechanism for controlling burner air. The oil nozzle is set inside the gas burner, and may be used with or without using the gas burner, or may be removed when gas alone is burned. Both nozzles may be moved back and forth in the setting, independently of each other and instantly at the will of the operator. A large shipment of these burners has recently been scheduled for a Texas Coast refinery.

Two innovations have been brought out comparatively recently in nonmetallic materials for refinery and field use, and were shown at the Exposition. One of these is an asbestos-concrete pipe, built specially for handling corrosive water, oil and solutions. It is built up in extremely thin layers on a mandrill, by depositing a sheet of the two materials, mixed, which is picked up by an endless moving sheet, much as pulp is handled in a paper mill. The proper thickness is attained and the cylinder is dried and hardened in a furnace. This development is especially applicable to handling any corrosive liquid.

The second fairly recent innovation is a special insulation for low temperature operation, its development prompted no doubt by the rapid increase in the use of very low temperature dewaxing operations. This material is prepared in various thicknesses and can be built up to eight inches total thickness It is composed of rock wool impregnated with asphaltic material and covered by a heavy fiber or other retaining jacket.

The refinery of Tomorrow may also use insulating material of spun glass threads pressed together into layers and applied with a retaining cover on the surface to be insulated. This material has the virtue, it is claimed, of not packing down, segregating or stratifying under the stress of vibration or jar, maintaining a uniform and unbroken layer of insulating material.

A MORE than 20 per cent increase in the yield point strength of pipe, especially well tubing and field piping, is claimed to result from cold-working the pipe through a die, compressing it somewhat. Piping so treated may be used in lighter weights for the same depths or for greater depths for the same weight, as compared to the older type product.

The development and use of red brass to resist certain types of corrosion continues, especially for heat exchanger service. A long series of alloys of various types contains different percentages of copper, zinc, nickel, chromium, aluminum, tin, and other metals. Of these the most expensive, for the most severe corrosion conditions, are tne chrome-nickel combinations, ranging downward to common brass and copper for non-corrosive liquids. These were shown at the Exposition.

A new vacuum filter unit, which will soon be announced, excited the attention of refiners at the Exposition, and bids fair to find an important place in the refinery of Tomorrow. It is in the form of a rotating cylinder, vacuum being applied to draw liquid from the outside inward, through a filter cloth which forms the shell of the drum. Before starting filtration a slurry of a very finely divided filter powder is pumped to the jacket surrounding the drum, which is kept partly filled always, the drum revolving at a very slow rate, dipping below the liquid level for practically half its circumference. A filter coat of extremely fine but highly porous material is deposited on the cloth, after which the slurry is removed to its special tank and the oil to be filtered—as in contact filtration—is pumped in.

Filter clay is thus removed from the oil. A shave knife strips an infinitesimal layer of the Precoat, as it is called, from the drum, removing with it the coloring matter and the clay, presented a clean fresh surface continuously through which the oil passes. This precoat material is said to pass 90 per cent or more through 300-mesh. The cylinders may be built up to eight feet diameter and 10 feet long.

A new method of scale removal, applicable especially to the water side of heat exchangers and condensers and to diesel engine jackets, is drawing attention, and if as successful as claimed, should find a place in the list of the new refinery devices and methods. This material is so suited to the individual job that it removes the scale, carbonate, sulfate or whatever the nature of the latter may be, without injuring the tubes or adjacent metals.

In attacking the individual problem, engineers study the situation at the plant, samples of scaled tubes are sent to the home laboratory for analysis and study, and the combination of chemicals suited to that problem is prescribed. The cost of the entire job is included in the chemical price.

No Price Cuts

OTTAWA—Decrease in the Canadian tariff on gasoline imported from the United States from 2.25 cents to 1 cent per gallon, has not resulted in a reduction in the price to the Canadian consumer, as was expected by many. The effect of the reduction was largely nullified by an increase in the sales tax from 6 per cent to 8 per cent.

ADVERTISING PAGE REMOVED

• MARKETS •

CLEVELAND, May 25

OIL markets experienced considerable difficulty in absorbing spot offerings of gasoline despite increased consumption the week ended May 23. Although movement of gasoline against contracts increased, more and more gasoline was finding its way to the open market as crude runs remained at a high level.

Lubricating oils still were the best items on the refined oil list. Under the stimulus of active demand, prices of both bright stock and neutrals were steady to higher. Natural gasoline was steady. Downward trend in natural prices apparently has run its course.

That the combination of large supplies of gasoline and an excessive rate of refinery operations was placing markets in a critical position was the opinion of many market observers. Despite the fact that stocks of gasoline are more than 8,000,000 barrels higher than they were a year ago, refiners reporting to the American Petroleum Institute are operating at around 79 per cent of capacity as compared to less than 70 per cent a year ago.

A considerable part of the gasoline being produced as the result of the higher rate of operations was being offered on the open market. When operations averaged less than 70 per cent a year ago, a number of refiners were not producing enough gasoline to meet their own requirements. Therefore, to supplement their own production they bought from other refiners on the spot market. At present rate of operations, these refiners have enough gasoline to meet their own requirements eliminating the necessity of their making outside purchases.

The pressure of increased offerings was most apparent in the Mid-Western market. Open market demand was not sufficient to absorb the volume of gasoline offered by refiners. Competition for business was unusually keen. Prices were lower.

The Mid-Continent market showed some improvement. Prices of low octane gasoline were reduced 0.125 cent to 4.625 cents in some districts, but moved back up to 4.75 cents when most of the surplus was absorbed. The theory that Rodessa "no-octane" gasoline was flooding markets was exploded in some quarters when it became known that the volume actually available had been greatly exaggerated. A market threat was removed when a substantial quantity of Rodessa crude that had been moved into East Texas for refining was impounded.

Wholesale markets along the eastern seaboard showed little change although retail markets in some sections still were unsettled. Some stations in the Boston area were selling regular gasoline for 10 cents a gallon, including 4 cents tax, compared to the general retail price of 16 cents, taxes included. A similar situation existed in metropolitan New York, with some stations selling branded gasoline at 14 cents, including 5 cents tax. So-called normal price in New York City is 19.2 cents, tax included.

It appears to some traders that unless the low retail prices prevailing in these two areas were eliminated, they might spread throughout the eastern marketing territory and might ultimately force a reaction in the wholesale market.

In an effort to attract buyers, export gasoline prices were reduced 0.25 cent by some suppliers at the Gulf. The French refiner who inquired for a mixed cargo a week ago, still had not placed an order at last reports. No new inquiries were reported.

Grade C bunker oil remained tight at the Gulf. Prices worked higher as lack of oil for prompt shipment caused sellers to advance their nominal quotations.

N. P.N. Gasoline Index

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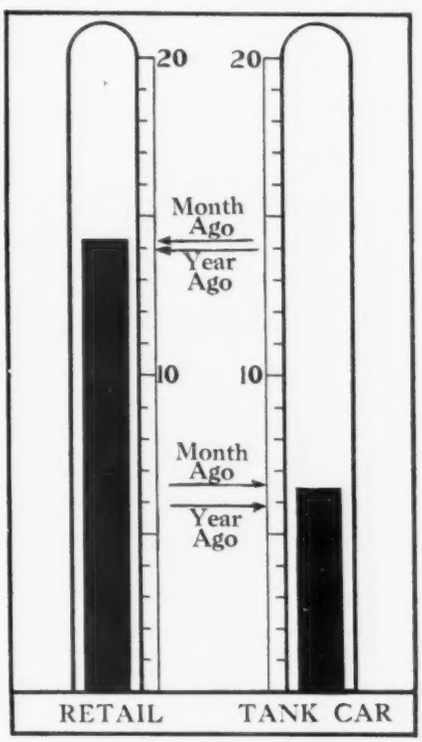

Retail index is an average of 50 cities, ex-tax, and tank car is a weighted average of 13 wholesale markets for regular-grade gasoline. The gasoline price index this week represents the following price in cents per gallon:

	Retail	Tank Car
May 25	14.28	6.40
Month ago	14.23	6.50
Year ago	13.92	5.99

PURCHASES of natural gasoline in the Mid-Continent increased in volume. Most of the demand was for the lower vapor pressure grades, but manufacturers switched their production to meet the demand. Prices for Grade 26-70 were well held at 2.75 cents, Group 3.

The statistical position of both Mid-Continent and Pennsylvania lubricating oils continued to improve. Stocks of Mid-Continent neutral were the lowest in five years, while suppliers of Pennsylvania neutrals were at around normal working levels.

Seasonal demand for bright stock together with the steady demand from foreign countries has placed bright stock inventories in unusually good shape. Combined inventories of Pennsylvania bright stock and 600 steam refined are the lowest in six years. Position of Mid-Continent bright stock also was good as demand remained steady.

While there were more inquiries for wax in the market, volume of buying was not sufficient to break the trend toward lower prices. As the week ended, however, buyers' and sellers' ideas of prices were nearly the same.

Mid-Continent

Gasoline Steadier

TULSA, May 23

COMPETITION in the Mid-Continent gasoline market eased somewhat as distress offerings of motor fuel became less urgent.

"No-octane" gasoline made from Rodessa crude was becoming less of a factor in the open tank car market. There were indications that the so-called "flood" of Rodessa gasoline has been greatly exaggerated. The volume available in the open market has been reduced to an almost negligible quantity. One plant that had been turning out gasoline, now has switched to naphthas. Much of the Rodessa crude that threatened to unsettle both crude and refined markets has been impounded by the courts and cannot be shipped in interstate commerce.

Proximity of East Texas to the Rodessa field may have been responsible for thte temporary break in prices of East Texas gasoline the past week. At one time during the week, open market orders for gasoline were extremely light. Reports of Rodessa and other low-priced gasolines became prominent. Out of this situation developed a temporary break in prices in East Texas. Prices for low octane dropped to 4.625 cents on a Group 3 basis. Offerings at 4.625 cents from East Texas were soon withdrawn when increased buying cleared up surplus supplies. As the week ended 4.75 cents was the low at which specification East Texas low octane gasoline could be bought on a Group 3, or f.o.b. plant, basis.

Small quantities of East Texas high octane gasoline were encountered during the week. Generally speaking, however, low-priced offerings covered material that had been heavily slugged with natural, had a high gum content and was off color. This product was offered at one time at as low as 4.875 cents. The better grades of 65 octane East Texas gasoline were selling at 5.125 to 5.25 cents, Group 3.

The price situation in other Mid-Continent districts was steadier since movement is mostly to contract and regular outlets. Contract shipments, especially of the higher octane grades of motor fuel, were brisk. Quotations for the 63-67 and 68-70 octane gasolines were steady. Some suppliers, however, reported that low-priced offerings of off-specification products were creating competitive price situations.

The Mid-Continent kerosine market was sluggish. Active inter-refinery buying and increased jobber purchases failed to boost prices.

Inquiries for natural gasoline from jobbers who normally obtain supplies from the Appalachian district were being received in the Mid-Continent. Jobber purchases covered principally the lower vapor pressure grades. Production of natural gasolines therefore was following the buying trend, thus leaving little Grade 26-70 available for spot shipment. Prices for this grade were well pegged at 2.5 cents Texas, 2.75 cents Group 3.

The statistical position of Mid-Continent neutral oil has improved considerably over the past month, according to most surveys. A survey indicated that stocks of viscous neutrals were lower last month than for any like period the past five years. The 200 No. 3 neutral oil, low pour point, remained somewhat uncertain. Offerings of this grade at 9.5 cents were less numerous and had about disappeared. Refiners almost without exception were quoting 11.75 cents as the week ended. Other grades were steady.

Curtailed production and increased consumption of bright stock has resulted in a favorable inventory position in the Mid-Continent. Export and domestic shipments were heavy and prices were unchanged.

Reduced prices for Mid-Continent wax have stimulated interest in this product. Most suppliers were holding at 2.5 cents, f.o.b. plant, for the 124-126 grade for domestic shipments. Export quotations were slightly lower.

Eastern

Retail Markets Unsettled

NEW YORK, May 23

GASOLINE markets along the eastern seaboard were generally unchanged during the week ended May 23.

Despite a continued increase in gasoline consumption, which brought with it improvement in tank car and barge movement from seaboard and inland terminals, there was no improvement in service station markets in the eastern area.

Some stations in the Boston area were selling regular grade gasoline at 10 cents a gallon, including 4 cents tax, compared to the general retail price of 16 cents, including taxes. The latter price is about 1.5 cents under so-called normal. A similar situation continued to prevail in the metropolitan New York area, with some stations selling branded gasolines at around 14 cents, including 5 cents tax, against the normal structure of 19.2 cents, including taxes.

Persistent reports have been heard that some of the major companies would discontinue posting a service station price, following the so-called Iowa plan of letting the dealer set the market. However, one major company who had been considering this plan was said to have decided against it, at least for the present.

Tank car gasoline prices were unchanged. Some suppliers selling unbranded gasoline said they were losing business at their present price of 7 cents, due to tank wagon sales based on differentials under the service station structure, which afforded a very low netback to the supplier.

No changes were apparent in the kerosine market. Demand was slack.

California

Prices Steady

LOS ANGELES, May 22

WHOLESALE and retail gasoline prices were steady the past week on all Pacific Coast petroleum markets outside the Los Angeles Basin area. In the San Francisco Bay district, as well as in the inland Sacramento Valley, stocks of low-priced gasoline were practically exhausted.

Although conditions in the San Joaquin Valley were not altogether satisfactory, the outlook was considered favorable as a greatly diminished quantity of competitive gasoline was being offered. In Oregon and Washington, tank wagon quotations were generally maintained at levels consistent with costs of transportation from refinery centers.

In the Los Angeles Basin area, however, a considerable increase was noted in the volume of gasoline offered at under the general tank wagon price of 13 cents per gallon, inclusive of 4 cents tax. In addition to the regular discount of 1 cent a gallon, offered to both 100 per cent and split-pump accounts, secondary companies and independent refiners were reported to be granting rebates of 1 to 1.5 cents a gallon in order to hold their outlets.

Determination of a leading independent refiner to regain outlets lost earlier in the year during a previous price war was an important factor in the situation. A general breakdown of the price structure in the Basin area was probably prevented by withdrawal from the market of a large quantity of low-grade gasoline that was being distributed by independent plants located between Los Angeles and Long Beach.

In the absence of any effective demand, kerosine and kerosine-distillate prices were easier. The range for kerosine distillate stock was generally from 2.5 to 3.25 cents a gallon, although some distress oil was reported offered at less than the lower figure named.

Burning oils at independent plants in the San Joaquin Valley and Los Angeles Basin were fractionally higher through a decrease in output, but litttle spot business was reported. Gas oil generally ranged from $0.90 to

$1.05 a barrel and fuel oil from 65 to 70 cents a barrel.

Pacific Coast seaboard markets were dull and a majority of shipments were intercompany transactions. No important changes in prices were reported. With the approaching seasonal increase in demand for petroleum products in Oriental markets some revival of export business was anticipated but, so far, inquiries did not indicate early large volume shipments.

Pennsylvania

Trading Quiet

CLEVELAND, May 23

ALTHOUGH open market trading was relatively quiet in the Pennsylvania market the week ended May 23, status of most products was fair to good. Offerings of fuel oil, however, were increasing at some points, and demand for wax continued dull.

Favorable motoring weather, combined with the recent reduction in price stimulated demand for gasoline. Lubricating oils remained active. Spot offerings of both bright stock and neutral oil were inclined to be scarce.

While some traders deplored the high rate of crude runs to stills, reports indicated that inventories of bright stock, neutrals, 600 steam refined, and gasoline have been reduced steadily. One trader reported that combined inventories of 600 steam refined and bright stock were the lowest in six years.

Operators were watching the export market closely. If there should be any reduction in purchases of either 600 steam refined or bright stock from that quarter, the favorable price trend now apparent might be upset, trade reports indicated. The present favorable position of bright stock is due mostly to the volume of movement to foreign countries, it was said.

Demand for neutrals remained fairly steady. Many Pennsylvania refiners were buying neutral to supplement their own production. This buying, combined with normal jobber purchases kept spot offerings fairly well cleaned up.

Offerings of gasoline were less burdensome as jobbers began ordering larger quantities. Spot movement did not keep pace with the increase in contract takings, but refiners were not so actively pushing sales. U. S. Motor and 65 octane still were available at 5.5 cents and 7 cents, respectively, in spite of the fact some refiners were quoting slightly higher prices.

Contradictory reports were heard about fuel oil. On the whole spot offerings were well held, but supplies at some plants were on the increase. More fuel oil was reported sold for

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cracking purposes. Whether this increase would take up the slack resulting from the decline in movement to steel mills was problematical.

Status of kerosine was similar to that of fuel oil. Inventories were on the increase, but some plants were not offering on the spot market. Prices were fairly steady.

A reduction in wax prices early in the week tended to stimulate buying. The trend toward lower prices, however, had not definitely come to an end, traders said.

Chicago

Open Market Slow

CHICAGO, May 22

THE Mid-Western gasoline market presented a two-sided picture the week ended May 22. Sides were at wide variance.

With the gradual improvement in weather conditions over most of the middle west, most sellers reported they were at a loss to reconcile the apparent difference in position between the open and contract gasoline markets here. This was explained, at least reasonably so, by several traders who believed that with crude runs at peak levels, more gasoline was coming from the stills of refineries which had no outlet other than the open market. With indications that inter-refinery purchases were less than they have been for some time, this material had "no place to go, but to the open market."

With open market sales insufficient to clear the volume of gasoline entering this market, offerings continued to pile up. Competition for what business existed was unusually keen, with most sales at shaded prices.

The bulk of offerings of gasoline which were piling up in the Mid-Western market came from East Texas and Louisiana. Reports indicated that refiners in other districts had not thrown their production onto this market.

On the other hand, the contract market for gasoline presented an orderly picture, according to virtually all sellers. Shipments to contract jobbers were brisk. Several refiners reported that the volume moving to this class of trade was in fair balance with production, resulting in a favorable position as regards inventories.

"Short" sales of gasoline added to the general downward pull on the market. Traders who were not averse to gambling in gasoline futures said they based their position on current crude runs which they believed too heavy, and gasoline stocks which important observers say are excessive. There were more than a few who expressed the belief that the expected increase in gasoline consumption would not balance the increase in crude throughput.

Retail gasoline markets generally were unchanged.

Kerosine was in the doldrums. One reseller reported scouring the market for an outlet for 30 cars of 41-43 w. w. kerosine, but could find no takers, even at shaded prices. Volume of kerosine moving to open market buyers was small. As movement subsided, trade interest has turned to other products.

Auto Output to Break Record

DETROIT—Passenger car and truck production for the first six months of this year will exceed 2,575,000 units, a record figure for the period excepting 1929, Alfred Reeves, vice-president and general manager of the Automobile Manufacturers Association, states.

A new high mark for trucks was set in the first four months of this year when 313,000 units were produced.

Coastal

Bunker Oil Higher

NEW YORK, May 23

A FURTHER tightening in bunker oil and lower prices for export grades of gasoline featured the Gulf Coast cargo markets in the week ended May 23.

A continued heavy call for cargoes of bunker oil for domestic shipment and a lack of oil for prompt shipment forced an upward move in Grade C prices during the week. Traders who were in the market for this product made firm offers of $0.80 a barrel for oil but reported they were unable to find any sellers.

Suppliers generally said they either were short of oil for their own needs or had no surplus and consequently were not interested in taking on a cargo. Nominal quotations for Grade C were at $0.82 to $0.85 a barrel, f.o.b. the Gulf, at the end of the week.

The continued upward trend of bunker C prices at the Gulf, coupled with a steady charter market at around 21 to 22 cents a barrel for dirty boats, narrowed still further the spread between the Gulf markets and prices along the eastern seaboard. Shore plant and ships' bunker prices at many points remained at $1.05 for Grade C oil with no indication of an advance.

Export gasoline quotations were lowered 0.25 cent by several Gulf suppliers in an effort to attract business. However, no cargo sales were reported closed. The French refiner who inquired for a cargo recently still had not placed the business at last reports.

Export cargo quotations on U. S. Motor gasoline were at 5.25 to 5.5 cents and at 5.5 to 5.75 cents for 64-66, 375 e.p. as the week ended.

No changes were reported in domestic gasoline, kerosine or fuel oil cargo prices.

Wax

Scale Quiet

NEW YORK, May 23.—Scale wax markets generally were quiet during the week ended May 23 and there was little of outstanding interest. A little more active buying was reported in some quarters, but in general, it appeared that buyers' and sellers' ideas of prices were not in accord. Sales of 124-126 white crude scale were reported at 2.35 to 2.45 a pound f.a.s. New York.

Fully refined waxes continued steady with demand fairly active and no recessions reported in prices.

Higher Taxes Threatened In Pennsylvania

HARRISBURG, May 25.—House Bills 19, 27 and 21 have passed the Pennsylvania House and now are before a Senate committee for action. These bills call for an increase ranging from 6 to 10 per cent in the tax on net income of corporations operating in the state; an increase in the state personal property tax; and a chain store tax from which service stations are not exempted.

Other bills which are being considered at the special session of the Pennsylvania legislature are H.B. 13 and H.B. 36. One seeks to increase the state gasoline tax 1 cent a gallon and the other to impose a 2-cent-a-gallon tax on fuel oil. Both bills still are in House committee.

H.B. 20, calling for increases in truck registration fees, also still is in committee. It is reported that it will be dropped in favor of H.B. 80 which has just been introduced. This bill would impose an excise tax on common carriers ranging from 2 mills per mile traveled for carriers of less than 5000 pounds up to 60 mills per mile for carriers of 36,000 to 39,000 pounds.

COMING MEETINGS

(*Continued from page 9*)

American Petroleum Institute, 17th annual meeting, Chicago, Nov. 9 to 12.

Independent Petroleum Association of America, annual meeting, Oklahoma City, Okla., Nov. 30 and Dec. 1.

1937

Kentucky Petroleum Marketers Association, Brown Hotel, Louisville, Ky., Feb. 8, 9, 10.

REFINERY TANK CAR MARKETS

Prices in cents per gallon, tank car lots, except where otherwise noted. Prices are those to domestic jobbers who resell to consumers. They do not represent inter-refinery sales, or sales for export. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude.

Gasoline *and* Naphtha

Oklahoma	**May 25**	**May 18**	**May 11**
48-54, 450 e.p. naphtha	4.75	4.75 – 4.875	4.75 – 4.875
U. S. Motor gasoline, by octane numbers*			
62 octane and below..	4.75 – 5.00	4.875– 5.125	4.875– 5.25
*63-67 octane.....	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
*68-70 octane (regular)	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
60-62, 400 e.p. gasoline	4.75 – 5.125	4.875– 5.125	4.875– 5.25
64-66, 375 e.p. gasoline	5.125	5.125	5.125
68-70, 350-360 e.p. gasoline.....	5.25	5.25	5.25
Western Penna. (Quotations and/or sales prices to car unloaders)			
Bradford-Warren:			
52-54 naphtha.....	5.375– 5.50	5.375– 5.50	5.50 – 5.625
Motor gasoline:			
U.S. Motor (58-62°)	5.50 – 5.625	5.50 – 5.625	5.625– 5.75
Minimum 60 octane	6.75 – 7.00	6.75 – 7.00	7.00 – 7.125
Minimum 65 octane	7.00 – 7.25	7.00 – 7.25	7.25 – 7.375
Minimum 70 octane	.....	.....	.....
64-66, 390 e.p. gasoline	5.75 – 5.875	5.75 – 5.875	5.875– 6.00
68-70, 350-360 e.p. gasoline.....	6.00 – 6.125	6.00 – 6.125	6.125– 6.25
Other districts:			
52-54 naphtha.....	5.375– 5.50	5.375– 5.50	5.50 – 5.625
54-56 naphtha.....	5.50 – 5.625	5.50 – 5.625	5.625– 5.75
Motor gasoline:			
U.S. Motor (58-62°)	5.50 – 5.625	5.50 – 5.625	5.625– 5.75
Minimum 60 octane	6.75 – 7.00	6.75 – 7.00	7.00 – 7.125
Minimum 65 octane	7.00 – 7.25	7.00 – 7.25	7.25 – 7.375
Minimum 70 octane	.....	.....	.....
64-66, 390 e.p. gasoline	5.75 – 5.875	5.75 – 5.875	5.875– 6.00
68-70, 350-360 e.p. gasoline.....	6.00 – 6.125	6.00 – 6.125	6.125– 6.25
California (3c tax to be added to prices if used in state)			
54-58 U.S. Motor, 437 e.p. for in-state shipment.....	7.25 – 7.75	7.25 – 7.75	7.25 – 7.75
54-58, U.S. Motor, 437 e.p. for outside state shipment.....	7.25 – 7.75	7.25 – 7.75	7.25 – 7.75
58-61, 375-400 e.p. gasoline, 65 octane and above.....	7.50 – 8.25	7.50 – 8.25	7.50 – 8.25
†***North Texas*** (F.o.b. Wichita Falls district for shipment to Texas and New Mexico destinations; Group 3 prices quoted on northern shipments).			
U. S. Motor gasoline, by octane numbers:			
62 octane and below..	4.875– 5.00	4.875– 5.00	4.875– 5.00
*63-67 octane.....	5.50 – 5.625	5.50 – 5.625	5.625– 5.75
*68-70 octane (regular)	6.00	6.00	6.00
60-62, 400 e.p. gasoline	5.00 – 5.125	5.00 – 5.125	5.00 – 5.125
64-66, 375 e.p. gasoline	5.125	5.125	5.125
68-70, 350-360 e.p. gasoline.....	5.25	5.25	5.25
Kansas (F.o.b refinery, Kansas destination)			
U. S. Motor gasoline, by octane numbers:			
62 octane and below..	5.125– 5.25	5.125– 5.25	5.125– 5.25
*63-67 octane.....	5.75 – 5.875	5.75 – 5.875	5.875– 6.00
*68-70 octane (regular)	6.25 – 6.375	6.25 – 6.375	6.25 – 6.375
60-62, 400 e.p. gasoline	5.125– 5.25	5.125– 5.25	5.125– 5.25
†***West Texas and New Mexico*** (F.o.b. W. Texas and N. Mex. refineries for unrestricted shipment)			
U. S. Motor gasoline, by octane numbers:			
62 octane and below..	4.875– 5.00	4.875– 5.00	4.875– 5.00
*63-67 octane.....	5.625– 5.75	5.625– 5.75	5.625– 5.75
*68-70 octane (regular)	6.00	6.00	6.00
†***East Texas*** (F. o. b. East Texas refinery for unrestricted shipment)			
U. S. Motor gasoline, by octane numbers:			
62 octane and below..	4.75	4.75	4.875
60-62, 400 e.p. gasoline	4.75	4.75 – 4.875	4.875
North Louisiana (For Louisiana and Arkansas destination)			
U. S. Motor gasoline:			
62 octane and below..	5.75	5.75	5.75
*63-67 octane.....	6.50	6.50	6.50
*68-70 octane (regular)	6.75	6.75	6.75

†Refiners generally receive from 0.25c to 0.5c per gallon more for gasoline and kerosine for local or differential territory shipment.

*Octane numbers revised to this basis April 15. Formerly, the two higher classifications were 63-70 octane and 71 and above.

	May 25	**May 18**	**May 11**
Arkansas (For Arkansas and Louisiana destination)			
U. S. Motor Gasoline;			
62 octane and below..	5.75	5.75	5.75
*63-67 octane.....	6.50	6.50	6.50
*68-70 octane (regular)	6.75	6.75	6.75
Ohio (Quotations of S. O. Ohio. Delivered any point in Ohio).			
U. S. Motor gasoline..	8.75	8.75	8.75
Above 65 octane no.	9.00	9.00	9.00

Natural Gasoline

(Prices shown f.o.b. Group 3 and Breckenridge represent majority of sales made on dates shown to blenders on the freight basis shown below, although shipments may originate in other manufacturing districts, such as East Texas, Panhandle, Southwest Texas or Kansas).

F.o.b. Group 3			
Grade 26-70.....	2.75	2.75	2.75
F.o.b. Breckenridge			
Grade 26-70.....	2.50	2.50	2.50
California (F. o. b. plants in Los Angeles basin)			
75-85, 375-390 e.p. for blending.....	8.25 – 9.00	8.25 – 9.00	7.75 – 8.75

Kerosine

Western Penna. (Quotations and/or sales prices to car unloaders)			
Bradford-Warren:			
45 w.w. kerosine.....	5.25 – 5.375	5.25 – 5.375	5.25 – 5.375
46 w.w. kerosine.....	5.375– 5.50	5.375– 5.50	5.375– 5.50
47 w.w. kerosine.....	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625
Other districts:			
45 w.w. kerosine.....	5.375– 5.50	5.375– 5.50	5.375– 5.50
46 w.w. kerosine.....	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625
47 w.w. kerosine.....	5.625– 5.75	5.625– 5.75	5.625– 5.75
Oklahoma			
41-43 kerosine.....	4.00 – 4.25	4.00 – 4.25	4.125– 4.375
42-44 w.w. kerosine...	4.25 – 4.50	4.25 – 4.50	4.375– 4.50
Kansas (F. o. b. refinery Kansas destination)			
41-43 w.w. kerosine...	4.50 – 4.625	4.50 – 4.625	4.625
42-44 w.w. kerosine...	4.625– 4.75	4.625– 4.75	4.75
†***North Texas*** (F.o.b. Wichita Falls district or shipment to Texas and New Mexico destinations; Group 3 prices quoted on northern shipments).			
41-43 w.w. kerosine...	4.375	4.375	4.375– 4.50
East Texas (F.o.b. East Texas refinery for unrestricted shipment)			
41-43 w.w. kerosine...	*3.875– 4.00	*4.00 – 4.125	*3.875– 4.125
*Nominal			
North Louisiana (For Louisiana and Arkansas destination)			
41-43 w.w. kerosine...	4.25 – 4.375	4.25 – 4.375	4.25 – 4.50
Arkansas (For Arkansas and Louisiana destination)			
41-43 w.w. kerosine...	*4.50 – 4.625	*4.50 – 4.625	*4.50 – 4.625
*Only one refiner quoting.			
California (F.o.b. California refineries)			
38-40 w.w. kerosine...	3.00 – 5.00	3.00 – 5.00	3.00 – 5.00

Gas *and* Fuel Oils

Western Penna. (Quotations and/or sales prices to car unloaders)			
Bradford-Warren:			
36-40 fuel oil.....	4.625– 4.75	4.625– 4.75	4.625– 4.75
‡*Other districts*:			
36-40 fuel oil.....	4.75 – 4.875	4.75 – 4.875	4.75 – 4.875
‡Not including Pittsburgh.			
Oklahoma (F.o.b. Oklahoma refineries)			
No. 1 white fuel oil.	3.75 – 4.00	3.875– 4.00	3.875– 4.00
No. 1 straw fuel oil.	3.375– 3.50	3.375– 3.625	3.50 – 3.625
No. 2 straw fuel oil.	2.875– 3.00	2.875– 3.00	3.00 – 3.125
No. 2 dark fuel oil..	2.75 – 2.875	2.75 – 3.00	2.875– 3.125
U. G. I. gas oil....	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625

(*Continued on page 75*)

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REFINERY TANK CAR MARKETS

Prices in cents per gallon, tank car lots, except where otherwise noted. Prices are those to domestic jobbers who resell to consumers. They do not represent inter-refinery sales, or sales for export. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude.

	May 25	May 18	May 11
Fuel oils: (Prices per barrel of 42 U. S. gallons)			
28-30, zero	2.875– 3.00	2.875– 3.00	2.875– 3.00
28-30	$1.00 –$1.10	$1.00 –$1.10	$1.00 –$1.10
24-26	$0.80 –$0.85	$0.80 –$0.85	$0.80 –$0.85
18-22	$0.725–$0.75	$0.725–$0.75	$0.725–$0.75
14-16	$0.625–$0.65	$0.625–$0.65	$0.65 –$0.675
Kansas (F.o.b. refinery, Kansas destination)			
No. 1 prime white	4.00	4.00	4.00
18-22 fuel oil (per bbl.)	$0.80 –$0.825	$0.80 –$0.825	$0.80 –$0.825
10-14 fuel oil (per bbl.)	$0.65 –$0.70	$0.65 –$0.70	$0.65 –$0.675
North Texas (F.o.b. Wichita Falls district for shipment to Texas and New Mexico; Group 3 prices quoted on northern shipments).			
No. 1 straw, fuel oil	3.375– 3.50	3.50	3.50
No. 1 white, fuel oil	3.75 – 3.875	3.75 – 3.875	3.75 – 3.875
U.G.I. gas oil	2.50	2.50	2.50
No. 2 fuel oil	2.75 – 3.00	2.875– 3.00	2.875– 3.00
24-26 fuel oil (per bbl.)	$0.70 –$0.725	$0.70 –$0.725	$0.70 –$0.725
18-22 fuel oil (per bbl.)	$0.65 –$0.675	$0.65 –$0.675	$0.675–$0.70
West Texas (F.o.b. West Texas refineries for unrestricted shipment).			
No. 2 fuel oil	*2.75 – 2.875	*2.875– 3.00	*2.875– 3.00
18-22 fuel oil (per bbl.)	$0.675–$0.70	$0.675–$0.70	$0.70 –$0.73
East Texas (F.o.b. East Texas refineries for unrestricted shipment)			
No. 1 white, fuel oil	*3.625– 3.75	*3.625– 3.75	*3.75
U.G.I. gas oil	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625
No. 2 fuel oil	*2.625– 2.75	*2.625– 2.75	*2.75
24-26 fuel oil	$0.65 –$0.675	$0.65 –$0.675	$0.675–$0.70
20-24 fuel oil	$0.65	$0.65	$0.65 –$0.675
*Nominal.			
North Louisiana (For Louisiana and Arkansas destination).			
No. 2 fuel oil	2.875– 3.00	2.875– 3.00	2.875– 3.00
U.G.I. gas oil	2.75	2.75	2.75
20-24 fuel oil (per bbl.)	$1.05 –$1.10	$1.05 –$1.10	$1.05 –$1.10
16-20 fuel oil (per bbl.)	$0.95 –$1.00	$0.95 –$1.00	$0.95 –$1.00
10-14 fuel oil (per bbl.)	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
Arkansas (For Arkansas and Louisiana destination)			
No. 2 fuel oil	*3.50 – 3.625	*3.50 – 3.625	*3.50 – 3.625
28-30 fuel oil, zero	*3.25	*3.25	*3.25
20-24 fuel oil (per bbl.)	$0.825–$0.875	$0.825–$0.875	$0.825–$0.875
16-20 fuel oil (per bbl.)	$0.725–$0.775	$0.725–$0.775	$0.725–$0.775
10-14 fuel oil (per bbl.)	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65
*Only one refiner quoting.			
California			
San Joaquin Valley, per bbl.:			
Grade C fuel oil	$0.65 –$0.75	$0.65 –$0.75	$0.65 –$0.75
Diesel fuel oil	$0.95 –$1.47	$0.95 –$1.47	$0.95 –$1.47
Stove distillate	$1.20 –$1.89	$1.20 –$1.89	$1.20 –$1.89
Los Angeles, per bbl.:			
Grade C fuel oil	$0.70 –$0.95	$0.70 –$0.95	$0.70 –$0.95
Diesel fuel	$0.95 –$1.47	$0.95 –$1.47	$0.95 –$1.47
Stove distillate	$1.20 –$1.89	$1.20 –$1.89	$1.20 –$1.89
San Francisco, per bbl.:			
Grade C fuel oil	$1.00	$1.00	$1.00
Diesel fuel	$1.68	$1.68	$1.68
Stove distillate	$2.10	$2.10	$2.10

Neutral Oils

Western Penna. (Quotations and/or sales prices to car unloaders)
Viscous Neutrals (Viscosity at 70° F.)

200 Vis. (180 at 100°) No. 3 color, 420-425 flash:			
0 pour test	23.00 –23.50	23.00 –23.50	22.50 –23.00
10 pour test	22.00 –22.50	22.00 –22.50	21.50 –22.00
15 pour test	21.50 –22.00	21.50 –22.00	21.00 –21.50
25 pour test	20.50 –21.00	20.50 –21.00	20.00 –20.50
180 Vis. (165 at 100) No. 3 color, 410-415 flash:			
25 pour test	19.50 –20.00	19.50 –20.00	19.00 –19.50
150 Vis. (143 at 100) No. 3 color, 400-405 flash:			
0 pour test	19.50 –20.00	19.50 –20.00	19.00 –19.50
10 pour test	18.50 –19.00	18.50 –19.00	18.00 –18.50
15 pour test	18.00 –18.50	18.00 –18.50	17.50 –18.00
25 pour test	17.00 –17.50	17.00 –17.50	16.50 –17.00

South Texas (F.o.b. South Texas refineries, for domestic shipment)

Vis. Color			
Pale Oils:	(*Viscosity at* 100° F.; *pour test* 0)		
100 No. 1½-2½	5.00	5.00	5.00
200 No. 2-3	7.00	7.00	7.00
300 No. 2-3	7.50	7.50	7.50
500 No. 2½-3½	8.50	8.50	8.50
750 No. 3-4	9.00	9.00	9.00
1200 No. 3-4	9.50	9.50	9.50
2000 No. 3-4	9.75 –10.00	9.75 –10.00	9.75 –10.00
Red Oils:			
200 No. 5-6	7.00	7.00	7.00
300 No. 5-6	7.50	7.50	7.50
500 No. 5-6	8.50	8.50	8.50
750 No. 5-6	9.00	9.00	9.00
1200 No. 5-6	9.50	9.50	9.50
2000 No. 5-6	9.75 –10.00	9.75 –10.00	9.75 –10.00

Note: South Texas red oil prices shown above cover oils with green cast: blue cast red oils are slightly lower in some cases.

Mid-Continent (Viscosity at 100° F.; F. o. b. Tulsa basis. Prices represent quotations and sales)

0 to 10 Pour Point:			
Pale Oils:			
Vis. Color			
60-85—No. 2	5.25	5.25	5.25
86-110—No. 2	5.75	5.75	5.75
150—No. 3	10.00	10.00	10.00
180—No. 3	11.25	11.25	11.25
200—No. 3	11.75	9.50 – 11.75	9.50 – 11.75
250—No. 3	13.75	13.75	13.75
280—No. 3	14.75	14.75	14.75
300—No. 3	15.25	15.25	15.25
Red Oils:			
180—No. 5	10.25	10.25	10.25
200—No. 5	10.75	10.75	10.75
250—No. 5	12.75	12.75	12.75
280—No. 5	13.75	13.75	13.75
300—No. 5	14.00	14.00	14.00

Note: Non-Viscous pale oils (60-110 vis.), 15 to 25 pour point are generally quoted 0.5c under 0 to 10 pour point oils; pale and red viscous oils (150-300 vis.) with 15 to 25 pour point are generally quoted 1c under 0 to 10 pour point oils. Viscous oils (150-300 vis.), No. 4 color, are generally quoted 0.5c above No. 5 color oils.

Chicago (F.o.b. Chicago District refineries) (Vis. at 100° F)

Pale Oils, *15 to 30 pour point:			
Vis. Color			
60-85—No. 2	6.50	6.50	6.50
86-110—No. 2	7.00	7.00	7.00
150—No. 3	10.00	10.00	10.00
180—No. 3	11.25	11.25	11.25
200—No. 3	11.75	11.75	11.75
250—No. 3	13.75	13.75	13.75
Red Oils, *15 to 30 Pour Point:			
180—No. 5	10.25	10.25	10.25
200—No. 5	10.75	10.75	10.75
250—No. 5	12.75	12.75	12.75
280—No. 5	13.25	13.25	13.25
300—No. 5	13.50	13.50	13.50

*60-110 vis. oils, with 0-10 pour point, bring 0.5c higher than above prices. Other oils with 0-10 pour point are quoted at 1c higher. To obtain prices delivered in Chicago, add 0.25c per gal.

California (F.o.b. California refineries; Viscosity at 100° F.)

All neutral oils, 11.5c per gal. in tank car lots; and 13.5c in iron bbls., to refiners only, excluding federal tax.

Cylinder Stocks

Mid-Continent (F.o.b Tulsa basis. Prices represent quotations and sales)

Bright Stocks:			
190-200 Vis. at 210° D	21.50	21.50	21.50
150-160 Vis. at 210°D:			
0 to 10 pour test	18.50	18.50	18.50
10 to 25 pour test	18.00	18.00	18.00
25 to 40 pour test	17.50	17.50	17.50
150-160 Vis. at 210° E	17.50	17.50	17.50
120 Vis. at 210° D:			
0 to 10 pour test	18.00	18.00	18.00
10 to 25 pour test	17.50	17.50	17.50
25 to 40 pour test	17.00	17.00	17.00
600 Stm. Rfd. Dark Green	5.75 – 6.50	5.75 – 6.50	5.75 – 6.50
600 Stm. Rfd. Olive Green	6.75 – 8.00	6.75 – 8.00	6.75 – 8.00
631 Steam Refined	*13.50	*13.50	*13.50
Black Oil	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375

*Only one refiner quoting.

Chicago (F.o.b. Chicago district refineries) (Viscosity at 210°)

Unfiltered Steam Refined:			
140	9.00	9.00	9.00
160	10.00	10.00	10.00
200	11.00	11.00	11.00
Bright stocks, 160 vis. at 210 No. 8 color:			
0 to 10 pour point	20.25	20.25	‡20.25
15 to 25 pour point	19.75	19.75	‡19.75
30 to 40 pour point	19.25	19.25	‡19.25
E filtered Cyl. Stock	14.50	14.50	14.50

To obtain prices delivered in Chicago, add 0.25c per gal.

‡Correction: These prices correct for May 11, instead of prices published in May 13 issue.

Western Penna. (A.S.T.M. tests; quotations and/or sales prices to car unloaders)			
600 stm. rfd. filterable	13.00 –13.50	13.00 –13.50	13.00 –13.50
650 steam refined	14.00 –14.50	14.00 –14.50	14.00 –14.50

(Continued on next page)

REFINERY TANK CAR MARKETS

Prices in cents per gallon, tank car lots, except where otherwise noted. Prices are those to domestic jobbers who resell to consumers. They do not represent inter-refinery sales, or sales for export. Federal, state or municipal taxes not included. Prices quoted apply on products made from legally produced crude.

Cylinder Stocks (cont'd)

	May 25	May 18	May 11
600 flash	15.00 –15.50	15.00 –15.50	15.00 –15.50
630 flash	17.50 –18.00	17.50 –18.00	17.50 –18.00
600 Warren E	15.00 –15.50	15.00 –15.50	15.00 –15.50
Bright stock, 145-155, vis. at 210°, 540-550 flash, No. 8 color:			
10 pour test	24.50 –25.00	24.50 –25.00	24.50 –25.00
15 pour test	23.50 –24.00	23.50 –24.00	23.50 –24.00
20 pour test	22.50 –23.00	22.50 –23.00	22.50 –23.00
25 pour test	21.50 –22.00	21.50 –22.00	21.50 –22.00

Petrolatums

Western Penna. (Per pound, in barrels, carload lots, f.o.b. Penna. refinery. In tank cars, 0.5c per pound less. Quotations are from majority of petrolatum makers).

Snow White	6.625	6.625	6.625
Lily White	5.625	5.625	5.625
Cream White	4.625	4.625	4.625
Light Amber	2.75	2.75	2.75
Amber	2.50	2.50	2.50
Red	2.00 – 2.125	2.00 – 2.125	2.00 – 2.125

Wax

	May 25	May 18	May 11
Western Penna. (Per pound, f.o.b. New York)			
122-124 wh. crude scale, A.m.p.	2.35 – 2.40	2.35 – 2.40	2.40 – 2.45
124-126 wh. crude scale, A.m.p.	2.40 – 2.45	2.40 – 2.45	2.45 – 2.50
Oklahoma (Per pound in barrels; n a few instances, per pound in burlap bags; f.o.b. Oklahoma refineries)			
124-126 wh. crude scale, A.m.p.	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625
Chicago (F.o.b. Chicago district refineries, in cents per pound, in bags, carload lots. Melting points A.S.T.M. method; add 3° F. to convert into A.m.p.)			
Fully refined:			
122-124	4.65 – 4.75	4.65 – 4.75	4.65 – 4.75
125-127	4.90 – 5.00	4.90 – 5.00	4.90 – 5.00
127-129	5.05 – 5.15	5.05 – 5.15	5.05 – 5.15
130-132	*5.45 – 5.55	*5.45 – 5.55	*5.45 – 5.55
132-134	*5.70 – 5.80	*5.70 – 5.80	*5.70 – 5.80
135-137	*6.45 – 6.55	*6.45 – 6.55	*6.45 – 6.55

*Same prices quoted in bags or slabs loose.

MID-WESTERN TANK CAR MARKETS

Following prices are in cents per gallon, except where otherwise noted, in tank car lots, representing majority of sales of products made by Chicago sellers, from legally produced crude to jobbers on Group 3 freight basis, although shipments may originate in other South-western or Mid-western refining districts. Prices do not include state or federal taxes.

Gasoline

U. S. Motor gasoline:	May 25	May 18	May 11
62 octane and below	4.625– 5.00	4.75 – 5.125	4.75 – 5.125
*63-67 octane	5.00 – 5.50	5.125– 5.75	5.125– 5.75
*68-70 octane (regular)	5.625– 6.00	5.625– 6.00	5.75 – 6.125
60-62, 400 e.p.	4.625– 5.125	4.75 – 5.125	4.75 – 5.125
64-66, 375 e.p.	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
68-70, 350-360 e.p.	5.125– 5.375	5.125– 5.375	5.125– 5.375

Kerosine

41-43 w.w.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
42-44 w.w.	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50

Fuel *and* Gas Oils

Domestic:			
No. 1 prime white	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00
No. 1 straw	3.25 – 3.50	3.25 – 3.50	3.375– 3.625

*Octane numbers revised to this basis April 15. Formerly, the two higher classifications were 63-70 octane and 71 and above.

	May 25	May 18	May 11
No. 2 straw	2.875– 3.125	2.875– 3.125	3.00 – 3.125
No. 2 dark	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
No. 3	2.625– 2.875	2.625– 2.875	2.75 – 3.00
No. 4 (per bbl.)	$0.975–$1.05	$0.975–$1.05	$0.975–$1.05
No. 5 (per bbl.)	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
Industrial:			
No. 4 (per bbl.)	$0.875–$0.90	$0.875–$0.90	$0.875–$0.90
No. 5, (per bbl.)	$0.625–$0.675	$0.625–$0.675	$0.625–$0.675
No. 6, (per bbl.)	$0.55 –$0.60	$0.55 –$0.60	$0.55 –$0.60
U.G.I. gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50

Naphtha *and* Solvent

Stoddard solvent	6.875	6.875	6.875
V. M. & P. naphtha	7.375	7.375	7.375
Cleaners' naphtha	7.375	7.375	7.375
Mineral spirits	6.375	6.375	6.375
Rubber solvent	7.375	7.375	7.375
Lacquer diluent	8.375	8.375	8.375

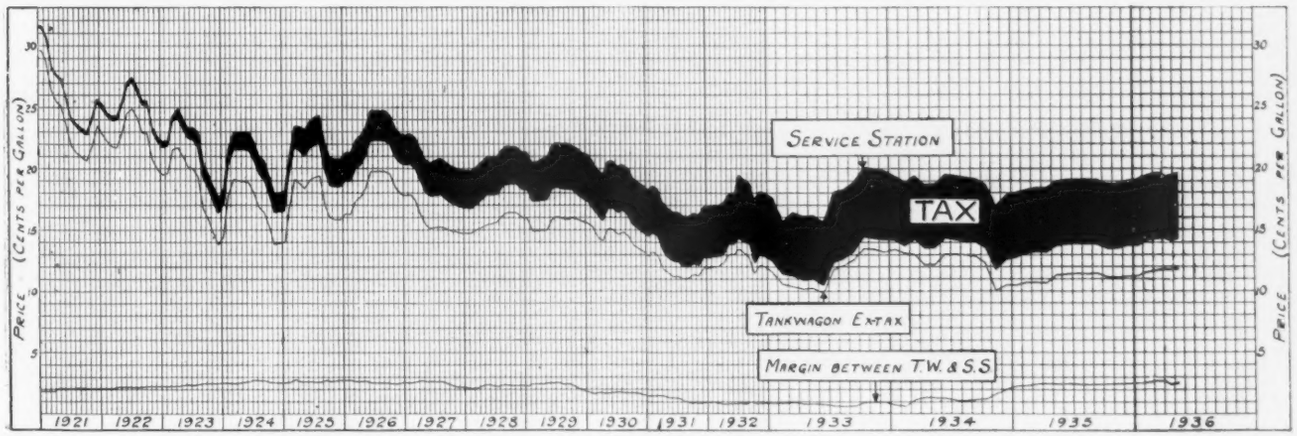
DAILY GASOLINE PRICES

Daily range of gasoline prices (cents per gallon) in tank cars, as reported in PLATT'S OILGRAM, (Week Ended May 22, 1936).

	May 18	May 19	May 20	May 21	May 22
U. S. Motor, 62 octane and below:					
East Texas	4.75	4.75	4.625– 4.75	4.75	4.75
*North Texas	4.875– 5.00	4.875– 5.00	4.875– 5.00	4.875– 5.00	4.875– 5.00
West Texas	4.875– 5.00	4.875– 5.00	4.875– 5.00	4.875– 5.00	4.875– 5.00
Oklahoma	4.875– 5.125	4.875– 5.125	4.875– 5.125	4.875– 5.125	4.875– 5.125
Mid-Western (Group 3 basis)	4.75 – 5.125	4.75 – 5.125	4.625– 5.00	4.625– 5.00	4.625– 5.00
U. S. Motor, †63-67 octane:					
*North Texas	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625
West Texas	5.625– 5.75	5.625– 5.75	5.625– 5.75	5.625– 5.75	5.625– 5.75
Oklahoma	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
Mid-Western (Group 3 basis)	5.125– 5.75	5.125– 5.75	5.125– 5.75	5.00 – 5.50	5.00 – 5.50
U. S. Motor, 68-70 octane (regular):					
*North Texas	6.00	6.00	6.00	6.00	6.00
West Texas	6.00	6.00	6.00	6.00	6.00
Oklahoma	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Mid-Western (Group 3 basis)	5.625– 6.00	5.625– 6.00	5.625– 6.00	5.625– 6.00	5.625– 6.00
Motor Gasoline, 60-64 octane					
New York harbor	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Philadelphia district	6.75	6.75	6.75	6.75	6.75
Baltimore district	6.75	6.75	6.75	6.75	6.75
Motor Gasoline, 65 octane & above					
New York harbor	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
Philadelphia district	7.00	7.00	7.00	7.00	7.00
Baltimore distsict	7.00	7.00	7.00	7.00	7.00
U. S. Motor Gasoline, 58-62°					
Bradford-Warren (Western Penna.)	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625
Other districts (Western Penna.)	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625
Motor Gasoline, Minimum 60 octane					
Bradford-Warren (Western Penna.)	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Other districts (Western Penna.)	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
Motor Gasoline, Minimum 65 octane					
Bradford-Warren (Western Penna.)	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
Other districts (Western Penna.)	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25

*For shipment to Texas and New Mexico destinations; Group 3 prices are quoted on northern shipments.
†Changed to 63-67 octane, April 15; formerly was 63-70 octane.

Trend of Gasoline Prices *and* Gasoline Taxes, at 50 Representative Cities



TANK WAGON, SERVICE STATION MARKETS

Tax column includes 1c federal tax, state gasoline tax, also city and county taxes as indicated in footnotes, and inspection fees, as shown in general footnote. These prices in effect May 25, 1936, as posted by principal marketing companies at their headquarters offices, but subject to later corrections

S. O. New Jersey

Essolene

	Consumer Tank Car	Dealer T.W.	Taxes	Posted S.S.	Kerosine T.W.
Atlantic City, N. J.	7.8	10.3	4	17.8	9
Newark, N. J.	7.8	10.3	4	17.8	7.5
Annapolis, Md.	8.1	10.6	5	19.1	10
Baltimore, Md.	7.5	10	5	18.5	8
Cumberland, Md.	9.1	11.6	5	20.1	12.7
Washington, D. C.	7.5	10	3	16.5	9
Danville, Va.	9	11.5	6	21	12.9
Norfolk, Va.	7.5	10	6	19.5	11.3
Petersburg, Va.	8	10.5	6	20	11.7
Richmond, Va.	8	10.5	6	20	11.7
Roanoke, Va.	9	11.5	6	21	12.9
Charleston, W. Va.	8.3	10.8	5	19.3	12.6
Parkersburg, W. Va.	7.6	10.1	5	18.6	11.2
Wheeling, W. Va.	8.5	11	5	19.5	12.2
Charlotte, N. C.	8.9	11.4	7	21.9	12.6
Hickory, N. C.	9.4	11.9	7	22.4	13
Mt. Airy, N. C.	9.2	11.7	7	22.2	12.8
Raleigh, N. C.	8.5	11	7	21.5	12.1
Salisbury, N. C.	9	11.5	7	22	12.7
Charleston, S. C.	7.5	10	7	20.5	11.3
Columbia, S. C.	8.8	11.3	7	21.8	12.6
Spartanburg, S. C.	9.2	11.7	7	22.2	12.9

Price basis to undivided dealers: Dealer t.w. price less 0.5c per gal.

Price basis to commercial consumers: Beginning Feb. 11, 1935, all new commercial consumers will be signed on following differentials over tank car price, on yearly purchases: up to 35,999 gals., 2.5c over t.c.; 36,000 to 119,999 gals., 2c; 120,000 to 239,999 gals., 1.5c; 240,000 to 479,999 gals., 1c; and over 480,000 gals., 0.5c.

Above prices apply only when deliveries are made in lots of 50 or 100 gals. at one time, depending on code region in which deliveries are effected.

If deliveries are made in less than these minimum quantities, s.s. price at time and place of delivery applies.

Non-contract customers will be billed at 2.5c over tank car price at time and place of delivery.

Kerosine Discount: 1c off t.w. price for 25 gals. or more, under contract thru territory (Baltimore City contract not necessary) except no discount in state of New Jersey.

Socony-Vacuum Oil Co., Inc.

(S. O. New York Division)

Socony Mobilgas

	"Split" Dealer T.W.	Taxes	Total "Split" Dealer T.W.	S.S.	Kerosine T.W.
Metropolitan N. Y. City: Boroughs of Manhattan and Bronx	9.2	*5	14.2	19.2	7.25
Borough of Richmond (Staten Is.)	9.2	*5	14.2	19.2	7.25
Borough of Brooklyn (Kings and Queens)	9.2	*5	14.2	19.2	7.25
Albany, N. Y.	9	5	14	17.5	7.75
Binghamton, N. Y.	10.5	5	15.5	19	9
Buffalo, N. Y.	9.5	5	14.5	18	8.25
Jamestown, N. Y.	10	5	15	18.5	8.25
Plattsburg, N. Y.	11	5	16	19.5	8.75
Rochester, N. Y.	9.5	5	14.5	18	8.25
Syracuse, N. Y.	9.5	5	14.5	18	8.75
Danbury, Conn.	9.5	4	13.5	17	8
Hartford, Conn.	9.5	4	13.5	17	7
New Haven, Conn.	9	4	13	16.5	7.5
Bangor, Me.	10	5	15	18.5	8
Portland, Me.	9.5	5	14.5	18	7.75
Boston, Mass.	8.5	4	12.5	16	7.5
Concord, N. H.	10.5	5	15.5	19	8.5
Lancaster, N. H.	11.5	5	16.5	20	9.5
Manchester, N. H.	10	5	15	18.5	8
Providence, R. I.	9	3	12	15.5	7.25
Burlington, Vt.	12	5	17	20.5	8.75
Rutland, Vt.	10.5	5	15.5	19	8.5

*Plus 2% city sales tax computed at time of each sale.

Discounts to dealers: thru territory, off normal s.s. price, 4c to undivided dealers, and 3.5c to "split" dealers; except Metropolitan N. Y. City, undivided dealers get 5.5c and divided dealers get 5c, effective May 7.

To commercial consumers: Effective Feb. 4, 1935, covering yearly purchases, billed at posted tank car price, plus these differentials: 2.5c for delivery of 1,200 to 36,000 gals.; plus 2c, for 36,000 to 120,000 gals.; plus 1.5c for 120,000 to 240,000 gals.; plus 1c for 240,000 to 480,000 gals.; plus 0.5c for 480,000 gals. and over. Those buying less than 1,200 gals. yearly, get retail s.s. price.

Atlantic Refining

Atlantic White Flash Plus Gasoline

	Total T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Philadelphia, Pa.	11.5	5	16.5	17.5	9.5
Pittsburgh, Pa.	12.5	5	17.5	19.5	10
Allentown, Pa.	12	5	17	18	9.5
Erie, Pa.	12.5	5	17.5	18.5	8
Scranton, Pa.	11.75	5	16.75	17	10
Altoona, Pa.	12.5	5	17.5	19.5	9.5
Dover, Del.	12	5	17	17	10
Wilmington, Del.	11.5	5	16.5	16.5	9.5

Socony-Vacuum Oil Co., Inc.—Cont'd

Socony Mobilgas

	"Split" Dealer T.W.	Taxes	Total "Split" Dealer T.W.	S.S.	Kerosine T.W.
Borough of Richmond (Staten Is.)	9.2	*5	14.2	19.2	7.25
Borough of Brooklyn (Kings and Queens)	9.2	*5	14.2	19.2	7.25
Albany, N. Y.	9	5	14	17.5	7.75
Binghamton, N. Y.	10.5	5	15.5	19	9
Buffalo, N. Y.	9.5	5	14.5	18	8.25
Jamestown, N. Y.	10	5	15	18.5	8.25
Plattsburg, N. Y.	11	5	16	19.5	8.75
Rochester, N. Y.	9.5	5	14.5	18	8.25
Syracuse, N. Y.	9.5	5	14.5	18	8.75
Danbury, Conn.	9.5	4	13.5	17	8
Hartford, Conn.	9.5	4	13.5	17	7
New Haven, Conn.	9	4	13	16.5	7.5
Bangor, Me.	10	5	15	18.5	8
Portland, Me.	9.5	5	14.5	18	7.75
Boston, Mass.	8.5	4	12.5	16	7.5
Concord, N. H.	10.5	5	15.5	19	8.5
Lancaster, N. H.	11.5	5	16.5	20	9.5
Manchester, N. H.	10	5	15	18.5	8
Providence, R. I.	9	3	12	15.5	7.25
Burlington, Vt.	12	5	17	20.5	8.75
Rutland, Vt.	10.5	5	15.5	19	8.5

*Plus 2% city sales tax computed at time of each sale.

Discounts to dealers: thru territory, off normal s.s. price, 4c to undivided dealers, and 3.5c to "split" dealers; except Metropolitan N. Y. City, undivided dealers get 5.5c and divided dealers get 5c, effective May 7.

To commercial consumers: Effective Feb. 4, 1935, covering yearly purchases, billed at posted tank car price, plus these differentials: 2.5c for delivery of 1,200 to 36,000 gals.; plus 2c, for 36,000 to 120,000 gals.; plus 1.5c for 120,000 to 240,000 gals.; plus 1c for 240,000 to 480,000 gals.; plus 0.5c for 480,000 gals. and over. Those buying less than 1,200 gals. yearly, get retail s.s. price.

Atlantic Refining—Cont'd

Atlantic White Flash Plus Gasoline

	Total T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Boston, Mass.	8.5	4	12.5	16	7
Springfield, Mass.	10	4	14	17.5	7.5
Worcester, Mass.	9.5	4	13.5	17	7.75
Fall River, Mass.	9	4	13	16.5	7
Hartford, Conn.	10.5	4	14.5	18	7
New Haven, Conn.	9	4	13	16.5	7.5
Providence, R. I.	9	3	12	15.5	7
Atlantic City, N. J.	10.3	4	14.3	17.8	9
Camden, N. J.	9.5	4	13.5	16.5	8
Trenton, N. J.	10.3	4	14.3	17.8	8
Annapolis, Md.	10.6	5	15.6	19.1	9.5
Baltimore, Md.	10	5	15	18.5	8
Hagerstown, Md.	11.1	5	16.1	19.6	10
Richmond, Va.	10.5	6	16.5	20	11.7
Wilmington, N. C.	10.1	7	17.1	20.6	11.4
Brunswick, Ga.	12	7	19	21	*13
Jacksonville, Fla.	10	8	18	20	12

Dealer discounts: on Atlantic White Flash Plus gasoline, thru territory, divided dealers, price equal to 3.5c off posted s.s. price; undivided dealers, price equal to 4c off posted s.s. price; authorized dealers contracts previous to Aug. 19, 1933, price equal to 3c less than posted s.s. price, plus 1c rental.

Price basis to commercial consumer: Effective Oct. 1, 1935, on yearly gasoline purchases based on posted tank car prices plus following amounts: 1,200 to 36,000 gals., 2.5c over t.c.; 36,000 to 120,000 gals., 2c; 120,000 to 240,000 gals., 1.5c; 240,000 to 480,000 gals., 1c; 480,000 gals. and over, 0.5c.

S. O. Ohio

Sohio X-70 Gasoline

	Total T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Ohio statewide	12.5	5	17.5	19.5	*13.5
Counties below statewide gasoline schedule: Paulding	11	5	16	17	....
Ashtabula, Champaign, Clarke, Franklin and Lucas	11.5	5	16.5	17.5	....

Renown (Third Grade Gasoline)

Ohio statewide	12	5	17	18	....
Counties below statewide gasoline schedule: Paulding	9	5	14	15	....
Ashtabula, Champaign, Clarke, Franklin and Lucas	11	5	16	16	....

Counties above statewide schedule:

Butler, Darke, Fairfield, Greene, Hamilton, Miami, Montgomery, Preble, Hocking and Summit: 12.5 5 17.5 19.5 ....

Kerosine Prices

(Off Statewide Level)

Kerosine prices are off statewide level in the following counties:

Gallia *13

Allen, Ashtabula, Auglaize, Champaign, Columbiana, Darke, Hancock, Hardin, Henry, Logan, Mahoning, Mercer, Portage, Preble, Putnam,

Above prices include these inspection fees on both gasoline and kerosine, per gallon, figured on basis of 50 gallons per barrel:

Alabama, 1/40c on gasoline, 1/2c on kerosine; Arkansas, 1/5c per gal. in a single barrel, 1/20c per gal. in bulk; Florida, 1/8c; Illinois, 3/100c; Indiana, 1/2c per gal. in a single barrel; 3/10c per gal. in lots of 2 to 10 bbls., 1/5c for 10 to 50 bbls., 2/25c for over 50 bbls.; Kansas, 1/50c. (3/50c can be charged to meet inspection department expenses); Louisiana, 1/32c; Minnesota, 1/25c; Missouri, 3/100c; Nebraska, 3/100c; Nevada, gasoline 1/20c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 2/25c per gal. in lots of more than 50 bbls., 1/5c in lots less than 50 bbls.; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c; and Wisconsin, 1/25c.

Kerosine inspection fee only: Iowa, 2/25c; Michigan, 4/5c per gal. for first 2 bbls.; 3/5c for next 3; 2/5c for next 5; 3/10c for next 15, and 1/5c per gal. in lots over 25 bbls.

TANK WAGON, SERVICE STATION MARKETS

Tax column includes 1c federal tax, state gasoline tax, also city and county taxes as indicated in footnotes, and inspection fees, as shown in general footnote. These prices in effect May 25, 1936, as posted by principal marketing companies at their headquarters offices, but subject to later corrections

S. O. Ohio—Cont'd

	Total Tax	T.W.	S.S.	Kerosine T.W.
Shelby, Summit, Trumbull, Union, Van Wert and Wyandot	*12.5			
Defiance and Paulding	*12			

Statewide Prices to Resellers & Agents

(These gasoline prices are on sliding scale based on actual spread between S. O. Ohio statewide tank car price and posted local s.s. price).

Including taxes	†Undivided Accounts	Divided Accounts	**Authorized Agents
Sohio X-70	16	16.5	16.5
Renown (3rd grade)	15 5	16	16

Note: On single deliveries of motor gasolines under 25 gallons, to t.w. consumers, s.s. price applies.

Sales tax: Ohio's 3% sales tax, effective Jan. 27, 1935, is added "where assessable, to regular posted prices." S. O. Ohio says.

*Kerosine prices include 1c state tax.

†Excluding authorized agents.

**Excluding 0.5c rental.

Discounts to contract tank wagon consumers only: on all motor gasolines, thru Ohio, effective Dec. 1, 1934, except counties mentioned hereafter, off posted t.w. price, on deliveries per month: 1,000 to 9,999 gals., 1.5c per gal.; 10,000 gals. and over, 2.5c. Under 1,000 gals., full t.w. price. Single deliveries of less than 25 gals., full s.s. price. Additional yearly discounts (less amount paid or credited to buyer on monthly purchases), off t.w. price: 12,000 to 119,999 gals., 1.5c; 120,000 gals. or over, 2.5c. Q. D. A. is off statewide schedule in the following counties: Allen, Auglaize, Columbiana, Darke, Hancock, Hardin, Logan, Lucas, Mahoning, Medina, Mercer, Putnam, Shelby, Trumbull, Union and Van Wert. For this information, write National Petroleum News.

Discounts on kerosine: to dealers and commercial consumers, 3c per gal. off t.w. price, any quantity.

S. O. Kentucky

Crown Gasoline

Lexington, Ky.	13	6	19	21	11
Louisville, Ky.	12.5	6	18.5	20	10
Paducah, Ky.	12	6	18	19	8.5
Covington, Ky.	12.5	6	18.5	20.5	10.5
Jackson, Miss.	13	7	20	22	*13
Vicksburg, Miss.	12.5	7	19.5	21.5	*13
Birmingham, Ala.	12.5	*8	20.5	22	12
Mobile, Ala.	13	*8	21	23	12
Montgomery, Ala.	13	*9	22	24	*14.5
Macon, Ga.	13	7	20	22	*14.5
Atlanta, Ga.	13.5	7	20.5	22.5	*13.5
Augusta, Ga.	13	7	20	22	*13
Savannah, Ga.	11.5	7	18.5	20.5	*13
Jacksonville, Fla.	10	8	18	20	12
Miami, Fla.	11.5	8	19.5	21.5	13.5
Tampa, Fla.	10	8	18	20	12.5
Pensacola, Fla.	12.5	*9	21.5	23.5	12

Kyso (Third Grade)

Lexington, Ky.	11.5	6	17.5	19	....
Louisville, Ky.	11	6	17	18	....
Paducah, Ky.	10.5	6	16.5	17	....
Covington, Ky.	11	6	17	18.5	....
Jackson, Miss.	11	7	18	19	....
Vicksburg, Miss.	10 5	7	17.5	18 5	....
Birmingham, Ala.	9.5	*8	17.5	18	....
Mobile, Ala.	11	*8	19	20	....
Montgomery, Ala.	10.5	*9	19.5	20	....
Atlanta, Ga.	10.5	7	17.5	18	....
Augusta, Ga.	10	7	17	17.5	....
Macon, Ga.	10	7	17	17.5	....
Pensacola, Fla.	11	*9	20	21.5	....

Dealer Discount: off posted s.s. price, on Crown and Crown Ethyl gasolines to "undivided" dealers 4c; on Kyso, 3c. To "divided" dealers: Crown and Ethyl, 3.5c, and Kyso, 2.5c, all effective on or about Jan. 1, 1934.

Discounts to tank wagon consumers: all single deliveries of 50 gals. or less, get posted s.s. price: all single deliveries of 50 gals. or more, to be billed at posted t.w. price, plus following discounts, off posted t.w. price: Ethyl and Crown gasoline, 50 to 2,999 gals. monthly, 1.5c; Kyso, 1c; 3,000 to 24,999 gals., Ethyl and Crown, 2c; Kyso, 1.5c; 25,000 gals. or more, Ethyl and Crown, 3c; and Kyso, 2.5c.

**Taxes*: in the tax column is included these city and county gasoline taxes at the following points: Birmingham, 1c city; Mobile, 1c city; Montgomery, 1c city and 1c county; Pensacola, 1c city. Georgia and Mississippi kerosine prices include 1c state tax Montgomery kerosine price includes 1c city tax.

S. O. Indiana

Standard Red Crown Gasoline

	Total Tax	T.W.	S.S.	Kerosine T.W.
Chicago, Ill.	11.5	4	15.5	17.5	10.1
Decatur, Ill.	12	4	16	18	10 1
Joliet, Ill.	12	4	16	16.5	10 1
Peoria, Ill.	12	4	16	18	10 1
Quincy, Ill.	11.8	4	15.8	17.8	9 9
Indianapolis, Ind.	12.9	*5	17.9	19.9	‡14.6
Evansville, Ind.	12.7	*5	17.7	19.7	‡14.6
South Bend, Ind.	13.1	*5	18.1	20.1	‡15
Detroit, Mich.	10	4	14	16	8.5
Grand Rapids, Mich.	12.4	4	16.4	18.4	9.3
Saginaw, Mich.	12.6	4	16.6	18.6	10.1
Green Bay, Wisc.	12.7	5	17.7	19.7	10.8
Milwaukee, Wisc.	11.3	5	16.3	18.3	10.4
La Crosse, Wisc.	12.4	5	17.4	19.4	10.5
Minneapolis, Minn.	12 4	4	16.4	18.4	10.5
Duluth, Minn.	12.8	4	16.8	18.8	10.9
Mankato, Minn.	12.4	4	16.4	18.4	10.5
Des Moines, Iowa	11.8	4	15.8	**18.8	9.9
Sioux City, Iowa	12	4	16	**18	10.1
Davenport, Iowa	12	4	16	**18	10.1
Mason City, Iowa	12.2	4	16.2	**18.2	10.3
St. Louis, Mo.	11.7	†4	15.7	17.7	9.8
Kansas City, Mo.	11.4	†4	15.4	17.4	9.5
St. Joseph, Mo.	11.4	†4	15.4	17.4	9.5
Fargo, N. D.	13.4	4	17.4	19.4	11.5
Minot, N. Dak.	14.6	4	18.6	20.6	12.7
Huron, S. Dak.	12.9	*5	17.9	19.9	11
Wichita, Kans.	10.9	4	14.9	16.9	7.1

Note: Kerosine s.s. prices are generally 3c above normal t.w. price.

Stanolind Gasoline (Third Grade)

Stanolind normal prices are 1c under normal Red Crown prices, thru territory. Among subnormal points are the following:

Decatur, Ill.	11	4	15	16.5	....
Evansville, Ind.	11.7	*5	16 7	18.2	....
Indianapolis, Ind.	11.9	*5	16.9	18.4	....
Des Moines, Iowa	9.1	4	13 1	**17.8	....
St. Louis, Mo.	10.7	†4	14.7	14.7	....
Detroit, Mich.	8.5	4	12.5	14.5	....
Milwaukee, Wis.	9.8	5	14.8	16.3	....
Huron, S. D.	11.9	*5	16.9	18.9	....
Wichita, Kans.	8	4	12	14.4	....
Minneapolis, Minn.	11.4	4	15.4	15.4	....

†St. Louis, Kansas City and St. Joseph prices include 1c city tax. ‡Includes 4c state tax.

*South Dakota gasoline and kerosine prices include 0.1c for sales tax. Indiana t.w. and s.s. gasoline prices include 0.2c for chain store tax.

**Service station prices for gasoline at Iowa points represent the opinion of National Petroleum News as to prices prevailing at the majority of stations.

Discounts to dealers: Effective Dec. 1, 1934, thru territory, except Michigan effective Apr 1, 1935, and except Chicago division and Iowa, maximum discounts to controlled and uncontrolled undivided gasoline accounts, off s.s. price at normal points: Ethyl and Red Crown gasoline, 3.5c; Stanolind 2.5c; in Chicago, effective July 1, 1935, Ethyl and Red Crown, 4c; Stanolind, 3c. Divided gasoline accounts thru territory, get 0.5c less per gallon. In case of lease and agency and AAA accounts, the above discounts include the 0.5c per gal. rental allowance. In Iowa, normal dealer prices are 1.5c below normal t.w. price for first and second grade gasolines, and 0.5c under normal t.w. for third grade.

Discounts to commercial consumers: Effective Jan. 1, 1935, thru territory, except Michigan effective Feb. 1, on purchases per month, discount off t.w. price: all gasolines, 25 to 1,000 gals., at t.w. price; 1,000 gals. or more, 1.5c off t.w. on Ethyl and Red Crown, and 0.5c on Stanolind. Purchases of less than 25 gals. get regular s.s. price.

S. O. Nebraska

Standard Red Crown Gasoline

Omaha, Neb.	12.4	6	18.4	20.4	10.4
McCook, Neb.	13.1	6	19.1	21.1	11.1
Norfolk, Neb.	12.8	6	18.8	20.8	10.8
North Platte, Neb.	13.2	6	19.2	21.2	11.2
Scottsbluff, Neb.	13.9	6	19.9	21.9	11.9

Reliance Gasoline (Third Grade)

Omaha, Neb.	11	6	17	17	....
McCook, Neb.	11.6	6	17.6	17.9	....
Norfolk, Neb.	11.8	6	17 8	19 8	....
North Platte, Neb.	12.2	6	18 2	20 2	....
Scottsbluff, Neb.	12.9	6	18.9	20.9	....

Discount to dealers: where service station gasoline prices are normal, resellers' allowance off service station prices are (*Maximum* over-all, including rent) as follows: Reliance, 2½c; Standard Red Crown, and Solite with Ethyl, 3½c. Where service station gasoline prices are below normal, resellers' allowances are reduced one-half of the amount below normal, down to the following (*Minimum* over-all including rent): Reliance, 2c, Standard Red Crown and Solite with Ethyl, 3c.

Discounts to consumers: for tank wagon deliveries covered only by Standard Commercial Consumer Contract, effective January 1, 1935.

S. O. Louisiana

Essolene

	Consumer Tank Car	Dealer T.W.	Taxes	Posted S.S.	Kerosine T.W.
Little Rock, Ark.	8	10.5	7.5	21.5	11.5
Alexandria, La.	8	10.5	*8	22	*11
Baton Rouge, La.	8	10.5	*7	21	*11.5
New Orleans, La.	7.25	9.5	*9	22	*12
Lake Charles, La.	8.5	11	*8	22.5	11
Shreveport, La.	7.5	10	*7	20.5	10
Lafayette, La.	8.5	11	*8	22.5	12.5
Bristol, Tenn.	9.5	10.75	8	21.5	14.5
Chattanooga, Tenn.	10	12.5	8	24	11.5
Knoxville, Tenn.	10.5	13	8	24.5	14
Memphis, Tenn.	8.5	11	8	22.5	11
Nashville, Tenn.	9.5	12	8	23.5	10

*Baton Rouge and Shreveport gasoline tax includes 5c state tax, 1c federal tax, and 1c parish tax. Alexander, Lake Charles and Lafayette, 2c parish tax. New Orleans, 3c parish tax. Louisiana kerosine prices include 1c state tax.

Price basis to dealers: Undivided dealers get dealer price, less 0.5c.

Price basis to commercial consumers: Effective Feb. 11, 1935, commercial consumers not under contract will be billed at 2.5c per gal. above posted bulk plant tank car price at time and place of delivery in lots of 50 gals or more at one time. Contract customers will be billed at following differentials over tank car price, on yearly purchases: up to 35,999 gals., 2.5c over tank car price; 36,000 to 119,999 gals., 2c over; 120,000 to 239,999 gals., 1.5c; 240,000 to 479,999 gals., 1c; 480,000 gals. and over, 0.5c.

On single deliveries to all classes of commercial consumers, of less than 50 gals., s.s. price at time and place of delivery applies.

Magnolia Petroleum

Mobilgas

	Total Tax	T.W.	S.S.	Kerosine T.W.
Muskogee, Okla.	10	5	15	19	8
Oklahoma City	10	5	15	19	8
Tulsa, Okla.	10	5	15	19	8
Fort Smith, Ark.	10.5	5	15.5	19	8
Little Rock, Ark.	10.5	7.5	18	21.5	9.5
Texarkana, Ark.	9.5	5	14.5	18.5	8.5
Dallas, Tex.	8.5	5	13.5	17	8.5
Ft. Worth, Tex.	8.5	5	13.5	17	8.5
Houston, Tex.	9	5	14	18	8.5
San Antonio, Tex.	9	5	14	18	8.5
El Paso, Tex.	10	5	15	19	8
Roswell, N. M.	11.5	††6.5	18	22	10
Santa Fe, N. M.	12.5	**7	19.5	23.5	12

Metro Gasoline (Third Grade)

Muskogee, Okla.	7	5	12	14	....
Oklahoma City	8	5	13	16	....
Tulsa, Okla.	8	5	13	13	....
Ft. Smith, Ark.	10.5	5	15.5	15	....
Little Rock, Ark.	10.5	7.5	18	18.5	....
Texarkana, Ark.	7.5	5	12.5	14	....
Dallas, Tex.	6	5	11	13	....
Ft. Worth, Tex.	7	5	12	14	....
Houston, Tex.	8	5	13	16	....
San Antonio, Tex.	8	5	13	16	....
El Paso, Tex.	7.5	5	12.5	15	....
Roswell, N. M.	8	††6 5	14.5	17.5	....
Santa Fe, N. M.	9	**7	16	19	....

*In Texarkana, 4c Texas tax applies; outside Texarkana, 6.5c Arkansas tax applies.

†In Fort Smith, 4c Oklahoma tax applies outside Fort Smith, 6.5c Arkansas tax applies.

**Includes 1c city tax.

††Includes 0.5c city tax

Note: *Price basis to dealers* off s.s. price in t.w., bulk or bbl. deliveries, on Mobilgas and Ethyl, normally: to 100% dealers, 4c; to divided dealers, 3.5c, except Texas no discount. On Metro gasoline in Texas, Oklahoma and New Mexico: to 100% dealers, 3c; to divided dealers, 2.5c, except Texas no discount. On Metro, in Arkansas and Louisiana: to 100% dealers, 3.25c.

Price basis to consumers: Thru Texas, effective Jan. 1, 1936, New Mexico, effective Jan. 18, and Oklahoma, effective Feb. 20, all grades of gasoline invoiced on the same graduated scale as now allowed 100% dealers, which see in above paragraph. Thru Arkansas and Louisiana, all grades gasoline invoiced at consumer's t.w. price, which on Mobilgas and Ethyl, normally is 3.5c less than s.s. price, less following contract quantity discounts at end of month, on all three grades, on monthly purchases: 3,001 to 10,000 gals., 0.5c; 10,001 to 20,000 gals., 1c; 20,001 to 40,000 gals., 1.5c; and 40,001 gals. and over, 2c. Metro invoiced at same price as Mobilgas.

TANK WAGON, SERVICE STATION MARKETS

Tax column includes 1c federal tax, state gasoline tax, also city and county taxes as indicated in footnotes, and inspection fees, as shown in general footnote. These prices in effect May 25, 1936, as posted by principal marketing companies at their headquarters offices, but subject to later corrections

Continental Oil

Conoco Bronze Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Denver, Colo.	13	5	18	20	11
Pueblo, Colo.	13	5	18	20	13
Grand Junction, Col.	16	5	21.5	23.5	15
Casper, Wyo.	14.5	5	19.5	21.5	11.5
Cheyenne, Wyo.	14.5	5	19.5	21.5	13
Billings, Mont.	16.5	6	22.5	24.5	14.5
Butte, Mont.	15	6	21	....	14.5
Great Falls, Mont.	16.5	6	22.5	24.5	14.5
Helena, Mont.	16.5	6	22.5	24.5	14.5
Salt Lake City, Utah.	16	5	21	23	16
Boise, Ida.	16.5	6	22.5	24.5	18
Twin Falls, Ida.	17	6	23	25	18
Albuquerque, N. M.	12	†6.5	18.5	20.5	13

Demand (Third Grade)

Denver, Colo.	11	5	16	18	....
Cheyenne, Wyo.	12.5	5	17.5	19.5	....
Helena, Mont.	14.5	6	20.5	22.5	....
Salt Lake City, Utah.	14	5	19	21	....
Boise, Ida.	14.5	6	20.5	22.5	....
Albuquerque, N. M.	8.5	†6.5	15	17	....

†Includes city tax of 0.5c.

Discounts: effective March 1, 1934, on gasolines thru territory, except Montana, off s.s. price: to "undivided" dealers: Ethyl and Conoco Bronze, 4c; Demand, 3c; to "divided" dealers: Ethyl and Conoco Bronze, 3.5c; Demand, 2.5c. Thru Montana, effective March 24, 1936, on gasoline, off t.w. price to "undivided" dealers: Ethyl and Conoco Bronze, 2c; Demand, 1c; to "divided" dealers: Ethyl and Conoco Bronze, 1.5c; Demand 0.5c.

S. O. California

Standard Gasoline

San Francisco, Cal.	13	4	17	18	11.5
Los Angeles, Cal.	12.5	4	16.5	17.5	9
Fresno, Cal.	13.5	4	17.5	18.5	11
Phoenix, Ariz.	15	6	21	22	†16
Reno, Nev.	14.5	5	19.5	20.5	13
Portland, Ore.	13.5	6	19.5	20.5	13.5
Seattle, Wash.	13.5	6	19.5	20.5	13.5
Spokane, Wash.	16.5	6	22.5	23.5	16.5
Tacoma, Wash.	13.5	6	19.5	20.5	13.5

Flight Gasoline (Third Grade)

San Francisco, Cal.	11.5	4	15.5	16.5	....
Los Angeles, Cal.	11	4	15	16	....
Fresno, Cal.	12	4	16	17	....
Reno, Nev.	13	5	18	19	....
Phoenix, Ariz.	13.5	6	19.5	20.5	....
Portland, Ore.	12	6	18	19	....
Seattle, Wash.	12	6	18	19	....
Spokane, Wash.	15	6	21	22	....
Tacoma, Wash.	12	6	18	19	....

†Includes 5c state tax.

Discount to dealers: effective March 3, 1936, on gasoline, off t.w. price; on Stanavo Aviation, to 100% dealers, 2c; split dealers, 1c; on Standard Ethyl and Standard Gasoline, to 100% dealers, 3c; to split dealers, 2c; on Flight gasoline, both 100% and split dealers, 2c.

To commercial consumers: effective March 3, 1936, off tank wagon price: on single deliveries of 40 gallons and over, advance quantity discount from above prices extended at time of delivery on Stanavo Aviation and Flight Gasoline, 2c per gallon; Standard Ethyl and Standard Gasolines, 3c. S.s. schedule applies on single deliveries less than 40 gallons.

On kerosine in tank car, transport truck and trailer delivery, 3c off t.w. price; plant deliveries to jobbers, 2.5c below t.w.

Canada

Prices of Imperial Oil Ltd.

Per Imperial Gallon, which is 1.2 U. S. Gallons

Imperial Three Star Gasoline

	T.W.	Taxes	Total T.W.	S.S.	Kerosine T.W.
Hamilton, Ont.	15	6	21	23.5	17
Toronto, Ont.	15	6	21	23.5	17
Brandon, Man.	23.8	7	30.8	33.8	22.3
Winnipeg, Man.	22.2	7	29.2	32.2	20.7
Regina, Sask.	23.5	7	30.5	33.5	22
Saskatoon, Sask.	26.3	7	33.3	36.3	24.8
Edmonton, Alta.	25.7	7	32.7	35.7	24.2
Calgary, Alta.	23	7	30	33	21.5
Vancouver, B. C.	19	7	26	29	24
Montreal, Que.	13.5	6	19.5	22	17.5
St. John, N. B.	17	8	25	29	19.5
Halifax, N. S.	17	8	25	29	19.5

Discounts to dealers:

Maritime Provinces, 4c per gallon off s.s. price to all classes of dealers. Quebec, except Montreal City, Prairie Provinces and British Columbia, 3c to divided dealers, 4c to undivided dealers. Ontario and Montreal City, 2½c to divided dealers, 3½c to undivided dealers.

Aviation Gasoline

Following are tank car and/or tank wagon prices of aviation gasoline in principal marketing territories (Stanavo aviation in all territories except Continental Oil and Magnolia Pet. Co.) Tax column includes 1c federal tax, and state tax; also municipal taxes as indicated in footnotes.

In Effect May 25, 1936

S. O. New Jersey

	Tank Car	T.W.
Bayonne, N. J.	10	12
Baltimore, Md.	10	12
Washington, D. C.	....	12.6
Richmond Va.	....	14.2
Greensboro, N. C.	....	14.7
Raleigh, N. C.	....	16.6
Charleston, W. Va.	....	14.2

Colonial Beacon Oil Co.

	T.W.
Brooklyn, N. Y.	12.8
Buffalo, N. Y.	14.1
Boston, Mass.	14.5

S. O. Pennsylvania

Philadelphia, Pa.	14.1
Pittsburgh, Pa.	14.9

S. O. Louisiana

New Orleans, La.	12.3
Shreveport, La.	12.6

Prices in above four territories do not include state or federal taxes. They are for 74 octane grade aviation gasoline. An 80 octane product generally brings 0.5c premium and an 87 octane product, 1.5c premium over the 74 octane grade.

Note: S.s. prices in abovef our territories are generally 6c over t.w. prices. Above t.w. prices are net, with no discounts allowed for quantity purchases. T.w. prices are generally tank car price, plus freight, plus 2.5c per gal.

S. O. Ohio

Thru Ohio

	Consumer T.W.	Tax	Total Consumer T.W.
Stanavo Ethyl Aviation:			
73 octane	15.5	5	20.5
80 octane	16.5	5	21.5
87 octane	17.5	5	22.5

Discounts: For delivery on contract to hangar operators and resellers: 2c below commercial consumer posted t.w. price.

S. O. Indiana

Chicago, Ill.	15	4	19
Indianapolis, Ind.	15.9	5	20.9
Detroit, Mich.	16.5	4	20.5
Milwaukee, Wisc.	15.3	5	20.3
Minneapolis, Minn.	15.4	4	19.4
St. Louis, Mo.	13.7	*4	17.7
Kansas City, Mo.	14.4	*4	18.4
Fargo, N. D.	16.4	4	20.4
Huron, S. D.	15.9	5	20.9
Wichita, Kans.	13.9	4	17.9

*Includes 1c city tax

**Includes 0.1c to cover sales tax.

Magnolia Petroleum

Dallas, Tex.	11.5	5	16.5

Humble Oil & Refining Co.

	Tank Car
Baytown, Tex. (exclusive of taxes)	8.5

Continental Oil Co.

	T.W.	Tax	Total T.W.
Denver, Colo.	16	5	21
Cheyenne, Wyo.	17.5	5	22.5
Helena, Mont.	19.5	6	25.5
Salt Lake City, Utah.	19	5	24
Albuquerque, N. M.	15	*6.5	21.5

*Includes city tax of 0.5c.

S. O. California

Phoenix, Ariz.	16	6	22
Los Angeles, Cal.	13.5	4	17.5
San Francisco, Cal.	14	4	18
Reno, Nev.	15.5	5	20.5
Portland, Ore.	14.5	6	20.5
Seattle, Wash.	14.5	6	20.5
Spokane, Wash.	17.5	6	23.5

Note: For discounts, etc., see note under Standard and Flight gasoline above.

Naphtha

In Effect May 25, 1936

(Net price in Tank Wagon; in Cents per Gallon)

	Mineral Spirits	V.M.&P. Naphtha
S. O. New Jersey		
Baltimore, Md.	14	15.5
Newark, N. J.	12.5	14.5
Washington, D. C.	14	*17.5

*Steel bbls. only.

Socony-Vacuum Oil Co.		
Buffalo, N. Y.	11.5	12.5
New York City	10.5	11.5
Rochester, N. Y.	12	....
Syracuse, N. Y.	14	....
Boston, Mass.	13	13.5
Bridgeport, Conn.	13	13.5
Providence, R. I.	13	14
Atlantic Refining Co.		
Philadelphia, Pa.	11.5	12.5
Lancaster, Pa.	13	14
Pittsburgh, Pa.	14.5	14.5

Note: Prices for Mineral Spirits also apply to Stoddard Solvent; and prices for V. M. & P. Naphtha apply also to Light Cleaners Naphtha. 2c off above t.w. prices to large buyers in some instances.

	S. R. Solvent	V.M.&P. Naphtha
S. O. Ohio		
Thru Ohio	14	13.75

Note: V.M.&P. Naphtha prices also apply on Dry Cleaners naphtha and special Varnolene; Varnolene and Sohio Solvent 0.5c below these prices.

	Mineral Spirits	V.M.&P. Naphtha	Stoddard Solvent
S. O. Indiana			
Chicago, Ill.	16.2	16.5	14
Detroit, Mich.	17.9	19	18
Kansas City, Mo.	13.9	14.9	13.9
St. Louis, Mo.	14.2	15	13.5
Milwaukee, Wis.	18.8	19.8	18.8
Minneapolis, Minn.	17.9	18.9	16.4

Note: Prices for V.M.&P. apply also to Light Cleaners Naphtha. All prices, with exception of Missouri points, include state tax. Prices shown are base prices, before discounts.

Naphtha (In Tank Cars)

In Tank Cars (F.o.b. refinery or seaboard terminal except Ohio, delivered price.)

	V.M. & P. Naphtha	Solvent
Baltimore	10	9.5
New York Harbor	10	9
Philadelphia district	10	9.5
Providence	10	9.5
Ohio points, delivered	9.25	*9.5

*This is on S.R. solvent.

Note: In Ohio, prices on D.C. naphtha and special Varnolene are same as V.M.&P.; on Varnolene and Sohio Solvent, prices are 0.5c less than on V.M.&P.

Latest Changes

From May 19 to May 25 inclusive. Dates and amounts of changes shown. See table for full current prices. Changes are on gasoline unless kerosine is indicated.

S. O. New Jersey—Essolene:

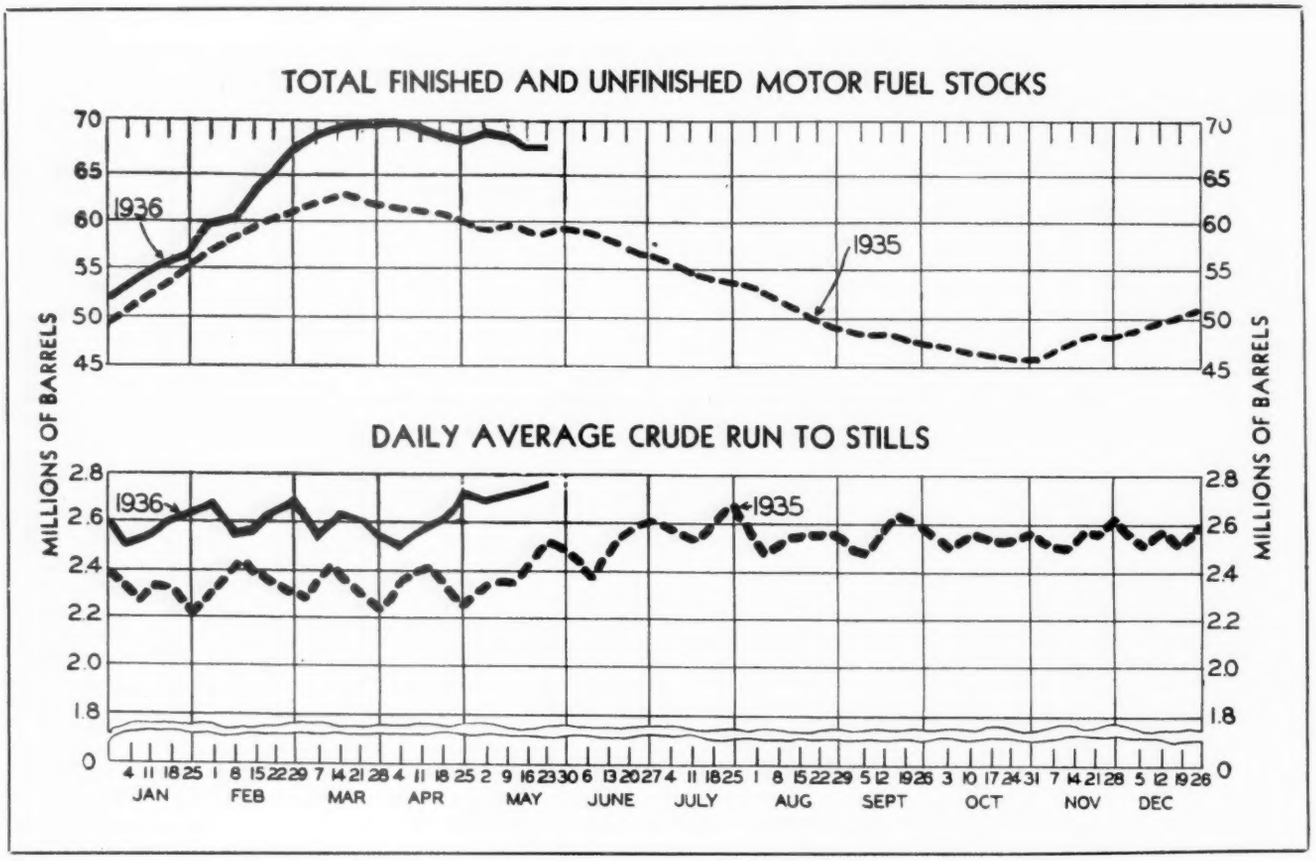
General cut thru North Carolina ranging from 0.1c to 0.4c, May 18. Charlotte, Mt. Airy and Salisbury, cut 0.3c; Hickory, cut 0.1c; Raleigh, cut 0.4c.

Kerosine:

Cut 0.1c to 0.6c, thru North Carolina, May 18; Charlotte and Salisbury,

(*Continued on page* 81)

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



Refinery Crude Runs Increase 57,000 Barrels

(By Telegraph)

NEW YORK, May 26

TOTAL motor fuel stocks, which declined nearly 1,000,000 barrels the week ended May 16, to 67,622,000 barrels, were entirely unchanged at the latter figure on May 23, even though stocks were shifted about considerably in various districts, the American Petroleum Institute reports.

Although refinery stocks declined 475,000 barrels, to 39,719,000 barrels the past week, these were exactly balanced by increases of 436,000 barrels in in-transit and terminal stocks and 39,000 barrels in unfinished gasoline stocks. In-transit stocks totaled 21,254,000 barrels and unfinished gasoline 6,649,000 barrels on May 23.

Motor fuel stocks at East Coast plants piled up 547,000 barrels, to 20,223,000 barrels the past week. California stocks were up 135,000 barrels, and Appalachian, Inland Texas and North Louisiana-Arkansas also chalked up smaller increases.

Three districts showed sizeable decreases in stocks of motor fuel. These were Indiana-Illinois-Kentucky, with a decline of 295,000 barrels; Oklahoma-Kansas-Missouri, with a decline of 228,000 barrels, and Louisiana Gulf districts, 246,000 barrels.

Crude runs to stills increased 57,000 barrels the past week, to 2,797,000 barrels daily average. This follows an increase of 49,000 barrels the previous week. The largest increase was at Texas Gulf plants where runs were up 29,000 barrels. Louisiana Gulf plants also increased their runs 13,000 barrels. Other districts showed smaller gains, and three showed slight decreases, with California indicating no change the past week.

CURRENT REFINERY OPERATIONS

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels) Total Finished and Unfinished Motor Fuel*		Total Finished and Unfinished Gas & Fuel Oil		Cracked Gasoline Production % Total Capacity Reporting	Daily Av. Production (Barrels) Week Ended	
		May 23	May 16	May 23	May 16	May 23	May 16	May 23	May 16		May 23	May 16
East Coast	100.0	495,000	489,000	80.9	79.9	20,228	19,681	8,179	8,003	100.0	111,000	96,000
Appalachian	94.8	105,000	100,000	71.9	68.5	2,701	2,614	484	442	98.7	24,000	21,000
Ind., Ill., Ky.	95.9	414,000	408,000	97.6	96.2	10,852	11,147	3,406	3,267	99.7	124,000	125,000
Okla., Kans., Mo.	84.8	299,000	295,000	77.9	76.8	7,351	7,579	2,717	2,666	89.1	65,000	65,000
Inland Texas	48.5	107,000	108,000	66.9	67.5	1,553	1,510	1,756	1,695	70.9	29,000	26,000
Texas Gulf	96.8	627,000	598,000	95.3	90.9	8,153	8,222	6,976	6,597	78.5	149,000	155,000
La. Gulf	96.4	129,000	116,000	79.1	71.2	1,491	1,737	1,975	1,926	96.1	22,000	19,000
No. La., Ark.	90.0	49,000	51,000	68.1	70.8	481	425	388	389	95.7	9,000	9,000
Rocky Mt.	61.9	44,000	47,000	73.3	78.3	1,532	1,562	733	730	84.8	13,000	14,000
California	92.6	528,000	528,000	66.9	66.9	13,280	13,145	71,327	71,134	100.0	60,000	67,000
Total Reporting	89.6	2,797,000	2,740,000	80.7	79.0	67,622	67,622	97,941	96,849	95.9	606,000	597,000
Estimated U. S. Total (Bur. of Mines Basis.)		2,975,000	2,920,000			72,490	72,490	100,212	99,120		650,000	645,000

*Includes stocks at refineries, in bulk terminals, pipe lines and in transit.

LIGHT FUEL *Prices* REDUCED

REFLECTING lack of buyer interest, light fuel oil prices were reduced in most refinery districts the week ended May 23. Industrial fuels remained in good shape although consumption was somewhat reduced.

Even No. 1 fuel oil which in recent weeks has been used largely for other than heating purposes was affected by lack of buying. Grades No. 2, 3, and 4 generally were reduced from 0.125 to 0.25 cent with few takers even at the lower prices.

Supply and demand for industrial grades of fuel oil remained in good balance. In some sections, however, industrial buying was not as heavy as it was two or three weeks ago.

* * *

TULSA, May 23.—The downward trend of Mid-Continent light fuel oils continued during the third week of May. Reductions were not quite as sharp as in the previous week, but slight price concessions were being made on most of the oils falling within the No. 1 to No. 3 specifications. Even the No. 1 prime white oil succumbed to light demand and prices dropped 0.125 cent in one or two districts.

Many refiners, rather than upset the market, were taking surplus offerings of light fuel oils to storage. This relieved the situation somewhat, but there still were a few cars too many available in the open market. Northern distributors of heating oils apparently were not interested in storing much light fuel at this time.

Little change was noted in the market for cracking stocks. Demand apparently was evenly balanced with demand. Prices were steady.

Railroad and industrial users still were the most consistent users of heavy fuel from the Mid-Continent. Prices were unchanged.

* * *

NEW YORK, May 23.—Reductions of 0.25 cent a gallon in tank car and barge prices of Nos. 2, 3 and 4 fuel oils at New York harbor, Boston and Providence featured the light fuel oil markets at eastern seaboard terminals the third week of May.

The reductions, made by most distributors, established a tank car price of 4.25 cents on Nos. 2 and 3 oils and 3.75 cents on No. 4 oil at New York and Providence. New prices at Boston were 4.25 cents on all three grades. Reports from Philadelphia and Baltimore were that markets there would probably drop to the lower levels due to competition from New York harbor, although prices were unchanged at the end of the week.

Tank wagon prices of light fuel oils also were reduced 0.25 cent at some points, although the reductions were not as general as the tank car cuts. Demand for these oils remained slack.

Industrial fuel oils remained in good demand and prices were steady.

CHICAGO, May 22.—Light fuel oils continued to hold little interest for buyers and sellers alike in the Mid-Western tank car market the week ended May 22.

Mild weather resulted in virtually no light heating oil being consumed, according to reports, and it was too early for distributors to consider filling storage against the next heating oil season, they said.

Buying of No. 1 prime white fuel for other than heating purposes has slowed up considerably, according to reports.

Price shading on most of the lighter fuels was reported increasing. As yet, however, sellers hesitated to make open price reductions in view of the attending lack of movement. They indicated they preferred to sit back and take business as it came, at prices which are competitive.

Industrial fuel oils were in good position. Buying was in fair balance with offerings, sellers reported.

FUEL OILS

Following are tank wagon prices of various grades of heating oil at the points shown in various territories. Prices are in cents per gallon.

Prices in Effect May 25, 1936

	No. 1	No. 2	No. 3	No. 4
S. O. New Jersey				
Newark, N. J.	7.25	6.50	6.50	6.50
Atlantic City, N. J.	8	6.5	6.5	6
Baltimore, Md.	8	6	6	5.5
Washington, D. C.	8.00	6.75	6.75	6.75

Discounts: At Newark and Atlantic City, purchasers taking 50,000 gals. get discount of 0.5c per gal.

Socony-Vacuum Oil Co., Inc.
(S. O. New York Division)

New York City	7	6.50	6.50	6.00
Albany, N. Y.	7.75	6.50	6.50	6.25
Rochester, N. Y.	8.25	7.00	7.00	7.00
Boston, Mass.	7.5	6.50	6.50	6.50
Bangor, Me.	8	6.50	6.50	6.50
Manchester N. H.	8	6.75	6.75	6.75
Burlington, Vt.	8.75	7.75	7.75	7.75
New Haven, Conn.	7.5	6.25	6.25	6.25
Providence, R. I.	7.25	6.50	6.50	6.00

Discounts: At New York City, consumers taking 10,000 to 50,000 gals., get 0.25c per gal. discount when minimum amount has been reached; above 50,000 gals., 0.5c.

Atlantic Refining

Philadelphia, Pa.	7.50	6.25	6.25	5.75
Allentown, Pa.	8	6.75	6.75	6.75
Wilmington, Del.	7.50	6.25	6.25	5.75
Springfield, Mass.	7.50	7	..	7
Worcester, Mass.	7.75	7.25	..	7.25
Hartford, Conn.	7	7	..	7

S. O. Ohio

Ohio Statewide	8	7.75	7.50	7.25

Note: S. O. Ohio prices are for hose dumps; bucket dumps are 0.5c per gallon higher.

S. O. Indiana
Stanolex Fuel Oil

	No. 1	No. 3
Chicago	7.25	6.5
Indianapolis	*11.7	*11.2
Detroit	6.8	6.8
Milwaukee	8	7
Minneapolis	8.2	7.2
Sioux City	8.8	6.4
St. Louis	7.2	6.5
Kansas City	6.6	5.9

*Includes state tax of 4c.

Note: Small-lot deliveries of light fuel oils range from 0.5c to 1.5c higher than above quotations.

TANK WAGON CHANGES

(*Continued from page 79*)

cut 0.3c; Hickory, cut 0.1c, Mt. Airy, cut 0.4c; Raleigh, cut 0.6c.

S. O. Ohio—Kerosine:

Henry County, cut 1c, May 20.

Magnolia Petroleum—Mobilgas:

Houston, t.w. up 0.5c, s.s. up 1c, May 19.

Metro:

Houston, t.w. up 2c, s.s. up 3c, May 19.

El Paso, t.w. up 1c, s.s. up 1.5c, May 21.

Corrections

Notation of amount of change and dates not previously shown in table. Table in this issue is corrected to show these changes. Changes are on gasoline unless kerosine is indicated.

S. O. Ohio—Kerosine:

Henry County was not cut 1c, March 27, as reported on page 117, April 1 issue. It has been on statewide structure up to May 20.

S. O. Kentucky—Crown:

Birmingham, t.w. cut 0.5c, s.s. cut 1c, May 7.

Kyso:

Birmingham, t.w. cut 0.5c, s.s. cut 1c, May 7; cut 1c, May 9.

S. O. Nebraska—Reliance:

Scottsbluff, s.s. up 2c, May 15.

Magnolia Petroleum—Mobilgas:

San Antonio, t.w. up 0.5c, s.s. up 1c, May 15, instead of t.w. up 1c, s.s. up 2c, as reported on page 77, May 20 issue.

Metro:

San Antonio, t.w. up 1c, s.s. up 2c, May 15, instead of t.w. up 0.5c, s.s. up 1c, as reported on page 77, May 20 issue.

Tulsa, t.w. up 2c, May 8.

CRUDE OIL MARKETS

Prices in $ per bbl. of 42 U. S. gals. at the well. A. P. I. gravity. Prices are effective as of 7 a.m. of dates as given.

Eastern Fields

Posted by Joseph Seep Purchasing Agency

(Effective Jan. 13, 1936)

Penna. Grade Oil in Southwest Penna. Pipe Lines.....$2.17
Penna. Grade Oil in Eureka Pipe Lines (West Virginia).....$2.12
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.).....$1.97
Corning Oil in Buckeye Pipe Lines (Ohio) $1.42

Posted by Other Companies

Tide Water Pipe Co., Ltd.
Bradford-Allegheny district (Penna. and N. Y.) (Effective Jan. 13, 1936)..$2.45
*The Pennzoil Co.: (Effective Jan. 13, 1936)
Penna. Grade Oil in National Transit Lines*.....$2.42
Ashland Oil & Transportation Co.:
Somerset Oil in Ashland Lines (Ky.):
(Effective Jan. 9, 1936)
Big Sandy River.....$1.30
Kentucky River.....$1.38
*The Pennzoil Co. posts $2.42 in Cochran, Franklin, Hamilton and Doolittle, Pa. fields; prices in other lower districts range down to $2.37 per bbl. at well.

Michigan

Posted by Pure Oil Co.

Midland, Midland County (Jan. 14, 1936) $1.32

Posted by Simrall Pipe Line Corp.

(Effective Jan. 14, 1936)

West Branch and equal grades.....$1.16
Beaverton, Crystal, Greendale, Porter and equal grades.....$1.32

Central States Fields

Posted by Ohio Oil Co.

(Effective Jan. 9, 1936)

Illinois, Princeton, Western Kentucky..$1.23
(Effective Jan. 10, 1936)
Lima.....$1.25

Posted by Stoll Oil Refining Co.

(Effective Jan. 9, 1936)

Stoll Pipe Line Oil (Ky.).....$1.28

Canadian Fields

Posted by Imperial Oil Refineries, Ltd.

Western Ontario

(Effective Sept. 9, 1933)

Petrolia.....$2.10
Oil Springs.....$2.17

Alberta—Turner Valley

(Prices f.o.b. field tankage)

(Effective Feb. 3, 1936)

Crude:		Naphtha:	
40-44.9	$1.55	†Clear	$2.70
45-49.9	2.12	†Discolored	2.46
50 and above	$2.32		

†Clear naphtha: 22 color; 10 lbs. vapor pressure, Reid method; 90% recovery; end point, 410°. Discolored naphtha: same specifications as for clear naphtha except color.

Mid-Continent

Posted by Stanolind Crude Oil Purchasing Co.

(Effective Jan. 9, 1936)

(In Oklahoma-Kansas)		(In North-North Central Texas)
Below 29	$0.94	$0.84
29-29.9	0.96	0.86
30-30.9	0.98	0.88
31-31.9	1.00	0.90
32-32.9	1.02	0.92
33-33.9	1.04	0.94
34-34.9	1.06	0.96
35-35.9	1.08	0.98
36-36.9	1.10	1.00
37-37.9	1.12	1.02
38-38.9	1.14	1.04
39-39.9	1.16	1.06
40 and above	1.18	1.08

Above Stanolind prices met as follows:

Jan. 9, by The Texas Co. in North and North Central Texas; Continental Oil in all three states.

Note: Stanolind prices in Okla.-Kans. are for quantities computed by 97% tank tables. In Texas, 99% tank tables are used, volume corrected to 60° F., and deduction for full b.s. & w. content

Posted by Carter Oil Co.

In Oklahoma

(Effective Jan. 9, 1936)

Below 25	$0.86	33-33.9	$1.04
25-25.9	0.88	34-34.9	1.06
26-26.9	0.90	35-35.9	1.08
27-27.9	0.92	36-36.9	1.10
28-28.9	0.94	37-37.9	1.12
29-29.9	0.96	38-38.9	1.14
30-30.9	0.98	39-39.9	1.16
31-31.9	1.00	40 and above	1.18
32-32.9	1.02		

Jan 9, Carter's Oklahoma gravity and price schedule met in Oklahoma-Kansas by Sinclair-Prairie, and Humble's West Central Texas schedule met in North and North Central Texas where Sinclair-Prairie buys. Same day, Shell Petroleum met Carter in full in Oklahoma-Kansas.

Posted by Magnolia Petroleum Co.

(Effective Jan. 9, 1936)

In Oklahoma, same schedule as Carter Oil, which see above, beginning with below 25, at $0.86 and ending with 40 & above, at $1.18.

In Texas: North and North Central, including Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden; and in Central Texas, including Mexia, Wortham, and Panola county, same gravity and price schedule as Humble in West Central Texas, which see below, beginning with below 29 at $0.84, and ending with 40 and above, at $1.08.

†***Posted by Humble Oil & Refining Co.***

Texas Fields

(**West Central Texas*)

(Effective Jan. 9, 1936)

Below 29	$0.84	35-35.9	$0.98
29-29.9	0.86	36-36.9	1.00
30-30.9	0.88	37-37.9	1.02
31-31.9	0.90	38-38.9	1.04
32-32.9	0.92	39-39.9	1.06
33-33.9	0.94	40 and above.	1.08
34-34.9	0.96		

*Includes Brown, Callahan, Coleman, Comanche, Eastland, Fisher, Haskell, Jones, Shackelford, Stephens, Throckmorton and Young counties.

Shell Petroleum Corp., on Jan. 9, met Humble in Fisher county, except that Shell posts five lower grades, beginning with below 25 gravity at $0.76; 25-25.9, $0.78; 26-26.9, $0.80; 27-27.9, $0.82; and 28-28.9, $0.84; rest of schedule same as Humble's in West Central Texas.

†Effective Dec. 1, 1934, Humble prices are based on 99% tank tables at 60F. Allowance or deduction of 1% is made for each 25° change in temperature above or below 60F.

**East Central Texas*

(Effective Jan. 9, 1936)

Below 29	$0.91	35-35.9	$1.05
29-29.9	0.93	36-36.9	1.07
30-30.9	0.95	37-37.9	1.09
31-31.9	0.97	38-38.9	1.11
32-32.9	0.99	39-39.9	1.13
33-33.9	1.01	40 and above.	1.15
34-34.9	1.03		

*Including Anderson, Cherokee, Limestone Navarro and Van Zandt counties.

Stanolind Oil & Gas Co., Jan. 20, posted in Marion County (East Central Texas), below 29 oil at $0.86, plus 2c differential, to 40 and above at $1.10.

Jan. 9, Sinclair-Prairie met Humble's prices in Mexia.

Panhandle Texas

Posted by Humble Oil & Refining Co.

(Effective Jan. 9, 1936)

	Gray County	Carson-Hutchinson
Below 35	$0.86	$0.81
35-35.9	0.88	0.83
36-36.9	0.90	0.85
37-37.9	0.92	0.87
38-38.9	0.94	0.89
39-39.9	0.96	0.91
40 & above	0.98	0.93

Jan. 9, above prices met by Sinclair-Prairie, Magnolia and The Texas Co. in the entire area, also by Continental Oil in Carson-Hutchinson.

East Texas

(Effective Jan. 9, 1936)

Stanolind, Humble, Shell, Sinclair-Prairie, Texas, Sun Oil and Magnolia.....$1.15
Shell also posted on Jan. 9, in Livingston area, Polk County, Texas, $1.15.

West Texas and New Mexico

Posted by Humble Oil & Refining Co.

(Effective Jan. 14, 1936)

(Including Andrews, Crane, Crockett, Ector, Glasscock, Howard, Winkler and Upton Counties, Texas, and Lea county, New Mexico).

Below 29	$0.75	33-33.9	$0.84
29-29.9	0.76	34-34.9	0.86
30-30.9	0.78	35-35.9	0.88
31-31.9	0.80	36 & above.	0.90
32-32.9	0.82		

Pecos, West Texas.....$0.85

Posted by Continental Oil Co.

(Effective Jan. 9, 1936)

Artesia, Jackson and Maljamar pools, N. M. $0.80

Jan. 16, Magnolia met Humble in Crane, Upton, Howard, Glasscock, Mitchell and Winkler.

Jan. 9, Texas Co. posted Winkler and Lea counties at $0.85; Crane and Upton, $0.80.

Shell Petroleum Corp., on Jan. 23, met Humble in Crane, Glasscock, Howard, Pecos (except Yates shallow pool) Winkler, and Upton counties, Tex., and in Lea County, N. Mex. On Jan. 9, Shell posted in Yates shallow pool in Pecos county, Tex., $0.75.

Northeast Texas

(Posted by Humble, April 15, 1936)

Talco.....$0.60

(Posted by Magnolia, May 1, 1936)

Cass County (Rodessa field):
Below 29.....$0.86
29-29.9..... 0.88
Rest of schedule same as S. O. La. posts in Rodessa, which see below.

South and Southwest Texas

Posted by Humble Oil & Refining Co.

(Effective Jan. 14, 1936)

Darst Creek	$0.97	Pettus	$1.25
Salt Flat	0.97	Tomball	1.30
Saxet	0.90	Mirando	0.85

Shell Pet. Corp. on Jan. 9, posted $0.97 in Salt Flat district, Tex.

Anahuac (Chambers county) and
Dickinson (Galveston county)
(Effective Jan. 9, 1936)

30-30.9	$1.04	36-36.9	$1.16
31-31.9	1.06	37-37.9	1.18
32-32.9	1.08	38-38.9	1.20
33-33.9	1.10	39-39.9	1.22
34-34.9	1.12	40 & above.	1.24
35-35.9	1.14		

Jan. 9, The Texas Co. posted $0.97 for Darst Creek.

Jan. 9, Magnolia posted $0.97 in Darst Creek; $1.30 in Tomball; $0.90 in Luling; $1.00 in Lytton Springs; $0.85 for Mirando; $1.10 for Cleveland, Liberty county, Tex.; $1.03 in Hardin, Liberty county, Tex.

Posted by Humble

Conroe and Raccoon Bend

(Deep sand crudes)

(Effective Jan. 9, 1936)

35-35.9	$1.24	38-38.9	$1.30
36-36.9	1.26	39-39.9	1.32
37-37.9	1.28	40 & above.	1.34

Jan. 9, Texas Co. met above prices.

North Louisiana-Arkansas

Posted by Standard Oil Co. of Louisiana

(Effective Jan. 10, 1936)

(In Caddo, Homer, Haynesville, Sabine, De Soto, Rodessa, Sarepta, Carterville, El Dorado and Miller county)

Below 25	$0.78	33-33.9	$0.96
25-25.9	0.80	34-34.9	0.98
26-26.9	0.82	35-35.9	1.00
27-27.9	0.84	36-36.9	1.02
28-28.9	0.86	37-37.9	1.04
29-29.9	0.88	38-38.9	1.06
30-30.9	0.90	39-39.9	1.08
31-31.9	0.92	40 and above.	1.10
32-32.9	0.94		

Smackover, Ark.....$0.75
Nevada, Ark..... 0.65
Urania, La. (La. Oil Refg. Co., Jan. 1, '34) 0.87
Tepetate, La. (Continental Oil, Jan. 9, '36)$1.12

The Texas Co., effective Jan. 9, posted in No. La.-Ark. same prices as Humble posts in West Central Texas. It also posted $0.80 for Smackover and $1.12 for La Fitte, La.

Magnolia Petroleum Co., effective Jan. 16, posted on No. La.-Ark. crude, prices beginning with $0.86 for below 29 gravity, plus 2 cent differential to 40 and above, at $1.10; this posting includes Rodessa, beginning March 16, 1936. It also posted on the same day, Eldorado (East Field), and Smackover, Ark., $0.75; Lockport, La., below 20 gravity, at $0.92, plus 2c differential, to 34 and above, which is $1.22; and for Iowa, La. and Cameron-Meadow field Cameron Parish, La., below 20 at $0.82, plus 2c differential, to 34 and above, at $1.12.

Stanolind Oil & Gas Co., Jan. 20, posted in Caddo Parish, La., below 29 oil at $0.86, plus 2c differential, to 40 & above at $1.10.

Shell Pet. on Jan. 9, posts same schedule in Black Bayou and White Castle, La. as Magnolia posts in Lockport, which see in above paragraph and in Iowa district, La. posts same schedule as Magnolia in Iowa and Cameron, which also see above.

(Continued on next page)

NEW REFINING PATENTS

Distillation and cracking. No. 2 037 674, issued April 14, 1936; filed Dec. 18, 1930; W. H. Bahlke and W. G. Whitman, assignors to Standard Oil Co. of Ind.; three drawings; 7 claims.

PORTIONS of heavy condensates which do not readily crack under the temperature and pressure conditions best adapted for the fresh stock and consequently tend to accumulate in the system and reduce its capacity are removed by introducing a liquid such as water before the condensates are withdrawn from the lower portion of the vapor fractionating column. The liquid is heated and converted into vapor which bubbles up through the hot condensate and strips it of a substantial portion of the heavier constituents. These heavy portions are known as naptha bottoms.

Sludge acids. No. 2 036 299, issued April 7, 1936; filed June 30, 1932; J. Robinson, assignor to Standard of Indiana; one drawing; three claims.

METHOD of recovering sludge acid. Sludge is hydrolized to yield dilute acid of about 30-35 Be. gravity and a small amount of an aliphatic alcohol having from about 4 to 8 carbon atoms is admixed with it at a temperature low enough to prevent reaction of the alcohol with the acid. The mixture is allowed to separate into an alcohol and an acid phase and the acid is concentrated for reuse.

An object of the invention is to break acid and organic impurities emulsions so that the dilute acid may be more easily concentrated and reused. One part of iso-amyl alcohol is used with nine parts of 30-35 Be. acid.

Desulfurizing. Nos. 2 037 789-90-1-2, issued April 21,1936; filed April 30, 1932 the Dec. 4, 1933; V. Ipatieff, assignor to Universal Oil Products Co.; no drawings, 34 claims.

IN desulfurization with hydrogen the improvement of the use of a metal oxide and an aluminate or a thiomolybdate of a metal, a metal oxide, and an aluminate.

* * *

Desulfurizing. No. 2 037 781, issued April 21, 1936; filed March 14, 1933; A. V. Grosse, assignor to Universal Oil Products Co.; no drawing; 8 claims.

PROCESS in which distillates are subjected to the action of hydrogen in the presence of a catalyst comprising cobalt thiomolybdate and sodium aluminate at a temperature adequate to react the hydrogen with sulfur compounds contained in the distillate.

(*Continued on page* 86)

CRUDE OIL MARKETS

Continued from preceding page

*Gulf Coastal Fields

Posted by Humble Oil & Refining Co.

(Effective Jan. 9, 1936)

Below 18	$0.88	26-26.9	$1.06
18-18.9	0.90	27-27.9	1.08
19-19.9	0.92	28-28.9	1.10
20-20.9	0.94	29-29.9	1.12
21-21.9	0.96	30-30.9	1.14
22-22.9	0.98	31-31.9	1.16
23-23.9	1.00	32-32.9	1.18
24-24.9	1.02	33-33.9	1.20
25-25.9	1.04	34 and above	1.22
Refugio heavy	$0.90		

Effective Dec. 1, 1934, Humble prices are based on 99% tank tables at 60F Allowance or deduction of 1% is made for each 25° change in temperature above or below 60F.

*Includes these fields: Barbers Hill, Goose Creek, Hull, Humble, Liberty, Moss Bluff, Mykawa, Orange, Pierce Junction, Rabbs Ridge, Raccoon Bend (shallow sand), Refugio light, Sour Lake, Spindletop, Sugarland, and West Columbia.

Above gravity and crude schedule met Jan. 9 by The Texas Co., except that Texas Co. posts $0.92 for below 20. Jan. 9, Sinclair-Prairie met above Humble schedule in full.

Rocky Mountain Fields

Posted by Stanolind Oil & Gas Co.

(Effective Jan. 9, 1936)

Salt Creek, Midway and Dutton Creek, Wyo., same schedule as Stanolind posts in Oklahoma-Kansas which see.

Elk Basin, light	$1.28
Grass Creek, light	1.28
Grass Creek, heavy	0.72
Greybull-Torchlight	1.28
Iles, light, Col.	1.06
Iles, heavy	1.00
Hogback, N. M.	1.21
Frannie light (Effective Feb. 24, '36)	0.78
Frannie heavy	0.72
Hamilton Dome, Wyo.	0.67
Pondera, Mont.	1.05

Posted by Ohio Oil Co.

(Effective Jan. 9, 1936)

Elk Basin, Wyo.	$1.28
Grass Creek, light and heavy	1.28
Rock Creek	1.12
Big Muddy	1.11
Sunburst, Mont.	1.25

Posted by Other Companies

(Effective Jan. 9, 1936)

Cutbank, Mont. (*Internatl. Refg. Co.)	$1.50
Cat Creek, Mont. (Continental Oil)	1.28

*Texas Co. subsidiary.

CALIFORNIA, Posted by Standard Oil of California

All gravities above those quoted take highest price offered in the field. Effective Feb. 25, 1936 except Huntington Beach, Playa del Rey, Santa Fe Springs, Kern Front, Signal Hill (Long Beach) effective Mar. 7, 1936

Gravity	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda Brea Canon	Athens Rosecrans	Dominguez	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	‡Newhall and others	Mountain View	Elk Hills	Buena Vista Hills, **Midway-Sunset	Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$0.80	0.79	0.74	0.78	0.79	0.80	0.76	....	....	0.80	0.76	0.76	0.77	0.78	....	0.70	....	0.65	0.70	0.65	0.70	0.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.65	.70	.65	.70	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.65	.70	.65	.70	.70	....
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	.80	.76	.76	.77	.78	....	.70	....	.65	.70	.65	.70	.70	....
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	.82	.76	.76	.77	.78	....	70	....	.65	.70	.65	.70	.70	....
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	.85	.76	.78	.77	.78	....	.70	0.70	.66	.74	.66	.74	.71	0.70
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	.88	.78	.82	.77	.80	....	....	.70	.68	.78	.68	.78	.72	.70
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	.91	.80	.85	.77	.84	.78	....	.73	.71	.82	.71	.82	.74	.70
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	.93	.84	.89	.79	.88	.78	....	.77	.74	.87	.74	.86	.78	.72
23-23.9	.95	.86	.77	.96	.99	1.02	.96	.84	.79	.96	.88	.93	.82	.92	.78	....	.80	.77	.92	.77	.90	.82	.76
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	.99	.91	.96	.85	.96	.82	....	.84	.80	.97	.80	.94	.86	.79
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	1.02	.95	....	.89	.99	.86	....	.88	.83	1.01	.83	.98	.90	.83
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	1.05	.98	....	.92	1.03	.90	....	.91	.86	1.06	.86	1.02	....	....
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	1.02	....	.96	1.06	.95	....	95	.88	1.10	.88	1.06	....	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	1.06	....	.99	1.10	.99	....	99	.91	1.15	.91	1.10	....	....
29-29.9	1.17	1.15	.93	1.18	1.18		1.17	1.12	.93	....	1.09	....	1.03	1.14	1.03	....	1.02	.94	1.20	.94	1.14	....	....
30-30.9	1.21	1.19	.95	1.22	1.21		1.21	1.17	.95	....	....	....	1.07	1.17	1.08	....	1.06	.97	1.25	.97	1.18	....	....
31-31.9				....	1.24		1.24	1.22	.97	....	....	....	1.11	1.21	1.12	....	1.09	.99	1.29	.99			
32-32.9	*Elwood Terrace			....	1.27		1.27	1.27	1.00	....	....	....	1.14	1.25	1.16	....	1.13	1.02	1.34	1.02	Kettleman Hills		
33-33.9	....	1.28	....	....	....		....	1.32	....	....	....	....	1.18	1.28	1.20	....	1.17	1.04	1.38	1.04	....	1.19	....
34-34.9	....	1.32	....	....	....		....	1.37	....	....	....	....	1.22	1.32	1.25	....	1.20	....	....	....	....	1.23	....
35-35.9	....	1.35	....	....	....		....	1.42	....	....	....	....	1.25	....	1.29	....	....	....	....	....	....	1.27	....
36-36.9	....	1.39	....	....	....		....	1.46	....	....	....	....	1.29	....	1.33	....	....	....	....	....	....	1.31	....
37-37.9	....	1.43	....	....	....		....	1.51	....	....	....	....	1.32	....	1.37	....	....	....	....	....	....	1.35	....
38-38.9	....	....	....	....	....		....	1.56	....	....	....	....	1.36	....	1.42	....	....	....	....	....	....	1.39	....
39-39.9	....	....	....	....	....		....	1.61	....	....	....	....	1.40	....	....	....	....	....	....	....	....	1.43	....
40-40.9	....	....	....	....	....	F.O.B. Standard Pipe Line	....	1.66	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

*F.o.b. ship.

‡Also McKittrick, Kern River, Kern Front and Round Mountain $0.70 thru 19.9 gravity; no higher gravity quoted. **Except Lakeview Area.

SEABOARD MARKETS, EXPORT AND COASTWISE

Prices do not include Federal tax. Where $ mark is shown, prices are per barrel of 42 U. S. gallons

Eastern Domestic

(Prices in cents per gallon tank car lots, unless otherwise noted, f.o.b. refinery or seaboard terminal, representing majority of sales and quotations to jobbers and/or consumers. Florida and S. Carolina inspection tax not included.)

*Motor Gasoline

Prices May 25	60-64 Octane	65 Octane and Above
New York harbor	6.75 – 7.00	7.00 – 7.25
New York harbor, barges	6.50 – 6.75	6.75 – 7.00
Philadelphia district	6.75	7.00
Baltimore district	6.75	7.00
Norfolk district	6.75	7.00
Wilmington, N. C. district	6.75	7.00
Charleston, S. C., district	6.75	7.00
Savannah district	6.75	7.00 – 7.25
Jacksonville district	6.75	7.00 – 7.25
Portland district	7.25	7.50
Boston district	6.75 – 7.00	7.00 – 7.25
Boston district, barges	6.50 – 6.75	6.75 – 7.00
Providence district	7.00	7.25
Providence district, barges	6.75	7.00

*Due to lack of companies offering U. S. Motor gasoline, 59 octane and below in the open market, prices for this grade are discontinued. Quotations nominally are 0.25c below those for 60-64 octane grade.

Water White Kerosine

Prices May 25			
New York harbor	4.625	Savannah district	5.50 – 5.75
N. Y. harbor, barges	4.50	Jacksonville district	5.50 – 5.75
Philadelphia district	4.875– 5.00	Portland district	5.50
Baltimore district	5.00	Boston district	5.00
Norfolk district	5.00	Boston dist., barges	4.875
Wilmington, N. C.	5.00	Providence district	5.00
Charleston, S.C., dist.	5.25	Providence, barges	4.875

*Fuel Oils

Prices May 25	New York harbor	New York harbor, barges	Philadelphia district
No. 1	4.625	4.50	4.875– 5.00
No. 2	4.25	4.125	4.25 – 4.50
No. 3	4.25	4.125	4.25 – 4.50
No. 4	3.75	3.625	4.00
No. 5 (per barrel)	$1.35	.....	$1.25
No. 6 (per barrel)	$1.05	.....	$1.05

	Baltimore district	Boston district
No. 1	5.00	5.00
No. 2	4.25 – 4.50	4.25
No. 3	4.25 – 4.50	4.25
No. 4	4.00 – 4.25	4.25
No. 5 (per barrel)	$1.25	$1.25
No. 6 (per barrel)	$1.05	$1.05

	Boston dist., barges	Providence district	Providence dist., barges
No. 1	4.875	5.00	4.875
No. 2	4.125	4.25	4.125
No. 3	4.125	4.25	4.125
No. 4	4.125	3.75	3.625

*Fuel oils meet specifications of U. S. Commercial Standards CS12-35.

	Bunker Oil Grade C Per Barrel	Diesel Oil Ships' Bunkers Per Barrel	Gas Oil 28-34 Gravity Per gallon	Diesel Oil Shore Plants Per gallon
New York harbor	*$1.05	*$1.65	4.25	4.25
Philadelphia dist.	*$1.05	*$1.65	4.50	....
Baltimore district	*$1.05	*$1.65	4.50	....
Norfolk district	*$1.05	*$1.65	4.50	....
Charleston district	$1.00	$1.65	....	....
Savannah district	$1.00	$1.89	....	4.75
Jacksonville dist.	$1.00	$1.995	....	4.75
Tampa district	$1.00	$1.995	....	....
Portland district	$1.15	$1.75	....	....
Boston district	$1.05	*$1.65	....	....
Providence district	$1.05	$1.65	....	....

*Lighterage for bunker oil, 5c per bbl. additional; for Diesel oil, 6.5c per bbl. additional.

Pacific Export

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

Prices—	May 25	May 18	May 11
53-55 U. S. Motor	5.00 – 5.50	5.00 – 5.50	5.00 – 5.50
400 e.p. blend 65 Octane and above	5.25 – 6.00	5.25 – 6.00	5.25 – 6.00
38-40 w.w. kerosine, 150 fire point	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00
41-43 w.w. kerosine	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
44 water white kerosine	5.00	5.00	5.00
Prime wh. kerosine	3.00 – 4.25	3.00 – 4.25	3.00 – 4.25
In Cargo lots, per barrel:			
Diesel fuel oil, above 23.9°	$1.05 –$1.20	$1.05 –$1.20	$1.05 –$1.20
Diesel fuel oil, under 23.9°	$1.00 –$1.10	$1.00 –$1.10	$1.00 –$1.10
30-34 gas oil	$0.90 –$1.10	$0.90 –$1.10	$0.90 –$1.10
Grade C fuel oil	$0.75 –$0.85	$0.75 –$0.85	$0.75 –$0.85

Pacific Export (cont'd)	May 25	May 18	May 11
In Ships' Bunkers, or deep tank lots, per barrel:			
Diesel fuel oil, above 23.9 gravity	$1.125–$1.25	$1.125–$1.25	$1.05 –$1.25
Diesel, under 23.9 gravity	$1.025–$1.15	$1.025–$1.15	$1.025–$1.15
Grade C fuel oil	$0.90 –$0.95	$0.90 –$0.95	$0.90 –$0.95
Cased Goods:			
Gasoline, U. S. Motor	$1.35 –$1.50	$1.35 –$1.50	$1.35 –$1.50
Gasoline, 400 e.p. blend	$1.50 –$1.65	$1.50 –$1.65	$1.50 –$1.65
38-40 w.w. kerosine, 150 fire point	$1.20 –$1.30	$1.20 –$1.30	$1.20 –$1.30
Kerosine, prime white	$1.15 –$1.25	$1.15 –$1.25	$1.15 –$1.25

New York Export

(Prices in cents per gallon in barrels, F.a.s. New York)

Cylinder Oils (Pennsylvania Products)

Bright stock:			
Light, 25 pour point	28.00 –28.50	28.00 –28.50	28.00 –28.50
Dark, 25 pour point	27.50 –28.00	27.50 –28.00	27.50 –28.00
Neutral oil:			
200 3 color, 25 pour point	27.50	27.50	27.00 –27.50
150 3 color, 25 pour point	24.00	24.00	23.50
600 Warren E filtered	22.00	22.00	22.00
600 stm. rfd. unfiltered	20.00	20.00	20.00
650 stm. rfd. unfiltered	21.00	21.00	21.00
600 flash, steam refined	22.00	22.00	22.00
630 flash, steam refined	24.50	24.50	24.50

Wax Domestic *and* Export

(Prices in cents per pound. Tests made by A. S. T. M. methods. Melting points shown below, however, are A. M. P., 3° higher than A. S. T. M. (E. M. P.) melting points. Export prices are f.a.s. carload lots. Domestic prices are f.o.b. refineries in New York and New Orleans districts, in bags, carload lots, with 0.2c discount allowed for shipment in bulk.)

	New York		New Orleans	
Prices—May 25	*Domestic*	*Export*	*Domestic*	*Export*
124-6 Y.C. scale	2.35 – 2.45	2.35 – 2.45	2.35 – 2.45	2.35 – 2.45
122-4 W.C. scale	2.30 – 2.40	2.30 – 2.40	2.30 – 2.40	2.30 – 2.40
124-6 W.C. scale	2.35 – 2.45	2.35 – 2.45	2.35 – 2.45	2.35 – 2.45
123-5 Fully refined	4.45	4.125	4.45	4.125
125-7 Fully refined	4.55	4.25	4.55	4.25
128-30 Fully refined	4.80	4.50	4.80	4.50
130-2 Fully refined	5.05	4.75	5.05	4.75
133-5 Fully refined	*5.35	5.25	*5.35	5.25
135-7 Fully refined	*5.60	5.50	....	....

*Shipment either in bags or in bulk.

Gulf Coast

(Prices are f.o.b. ship at Gulf oil terminals representing sellers' opinions except prices specified to the contrary. Prices cover bulk shipments of 20,000 barrels or more, unless otherwise noted.)

Motor Gasoline

For Domestic Shipment

Prices—	May 25	May 18	May 11
59 octane and below	5.625– 5.75	5.625– 5.75	5.625– 5.75
60-64 octane number	6.00	6.00	6.00
65 octane and above	6.125– 6.25	6.125– 6.25	6.125– 6.25

Fuel Oils

No. 1 Fuel oil	3.75	3.75	3.75
No. 2 Fuel oil	3.25 – 3.50	3.50	3.50
No. 4 Fuel oil	3.125	3.125	3.125

*Sale only.

Kerosine

41-43 w.w.	3.75	3.75	3.75

Gasoline

For Export Shipment

U. S. Motor gasoline	5.25 – 5.50	5.50	5.50
60-62, 400 e.p. gasoline	5.375– 5.50	5.50	5.50
61-63, 390 e.p. gasoline	5.50	5.625	5.625
64-66, 375 e.p. gasoline	5.50 – 5.75	5.75	5.75

Kerosine

44 water white	4.25	4.25	4.25
41-43 water white	3.75 – 3.875	3.75 – 3.875	3.75 – 3.875
41-43 prime white	3.75 – 3.875	3.75 – 3.875	3.75 – 3.875

(*Continued on next page*)

SEABOARD MARKETS, EXPORT AND COASTWISE

Prices do not include Federal tax. Where $ mark is shown, prices are per barrel of 42 U. S. gallons

(Continued from preceding page)

Gas and Bunker Oils

For Domestic and/or Export Shipment

Prices—	May 25	May 18	May 11
*26-30 translucent gas oil	3.125- 3.25	3.125- 3.25	3.125- 3.25
*30 plus translucent gas oil	3.125- 3.25	3.125- 3.25	3.125- 3.25
*30 plus transp. gas oil	3.25	3.25	3.25
Diesel Oil Ships' bunkers	$1.50	$1.50	$1.50
Grade C bunker oil, for ships' bunkers, per bbl	†$0.90	†$0.90	†$0.90
Grade C bunker oil, per bbl. in cargoes	‡$0.82 -$0.85	‡$0.80 -$0.85	‡$0.80 -$0.85

*Less than ½ of 1% sulphur. †Lighterage 5c per bbl additional.

Mexican Crude and Bunker Oils

(F.o.b. Steamer, Tampico)

Heavy Panuco crude taxes to be paid, per bbl	$0.77 -$0.78	$0.75 -$0.78	$0.73 -$0.75
Grade C bunker oil, ships' bunkers, taxes paid, per bbl	$0.90	$0.90	$0.90

Mid-Continent Lubricating Oils

(Prices in cents per gallon in bbls. f.a.s. Gulf terminals. In drums and new barrels, 0.5c to 1c higher per gal. in some instances.)

190-200 vis. D 210 brt. stk	26.50	26.50	26.50
150-160 vis. D. 210 brt. stk:			
0-10 pour point	23.50	23.50	23.50
10-25 pour point	23.00	23.00	23.00
25-40 pour point	22.50	22.50	22.50
150-160 vis. E 210 brt. stock	22.50	22.50	22.50
120 vis D 210 bright stock	22.00	22.00	22.00
180 vis. No. 3 color neutral oil:			
0-10 pour point	17.25 -17.50	17.25 -17.50	17.25 -17.50
15-30 pour point	16.25 -16.50	16.25 -16.50	16.25 -16.50
200 vis. No. 3 color neutral oil:			
0-10 pour point	17.75 -18.00	17.75 -18.00	17.75 -18.00
15-30 pour point	16.75 -17.00	16.75 -17.00	16.75 -17.00

Mid-Continent Lubricating Oils Cont'd

Prices—	May 25	May 18	May 11
600 s.r. olive green	12.50	12.50	12.50
600 s.r. dark green	11.00 -11.25	11.00 -11.25	11.00 -11.25
631 s.r.	18.00	18.00	18.00

South Texas Lubricating Oils

(Viscosity at 100° F., pour point 0. Tanker, f.o.b. Gulf oil terminals, for export shipment)

Unfiltered Pale Oils:

Vis. Color			
100 No. 3	5.25 - 5.50	5.25 - 5.50	5.25 - 5.50
200 No. 3	6.375- 7.00	6.375- 7.00	6.375- 7.00
300 No. 3	7.00 - 7.50	7.00 - 7.50	7.00 - 7.50
500 No. 3½	7.875- 8.50	7.875- 8.50	7.875- 8.50
750 No. 4	9.00 - 9.25	9.00 - 9.25	9.00 - 9.25
1200 No. 4	9.25 - 9.50	9.25 - 9.50	9.25 - 9.50
2000 No. 4	9.75 -10.25	9.75 -10.25	9.75 -10.25

Red Oils:

Vis. Color			
100 No. 5-6	5.25 - 5.50	5.25 - 5.50	5.25 - 5.50
200 No. 5-6	6.125- 6.75	6.125- 6.75	6.125- 6.75
300 No. 5-6	6.75 - 7.00	6.75 - 7.00	6.75 - 7.00
500 No. 5-6	7.25 - 7.625	7.25 - 7.625	7.25 - 7.625
750 No. 5-6	9.00 - 9.25	9.00 - 9.25	9.00 - 9.25
1200 No. 5-6	9.25 - 9.50	9.25 - 9.50	9.25 - 9.50
2000 No. 5-6	9.75 -10.25	9.75 -10.25	9.75 -10.25

Note: Red oil prices shown above cover oils with green cast; prices for blue cast red oils are slightly lower in some cases.

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shipments per ton of 2240 pounds. British sterling: to U. S. ports, cents per barrel)

Rates—May 25	Crude &/or Fuel Last Paid	Crude &/or Fuel Owners Ask	Refined Oil &/or Spirits Last Paid	Refined Oil &/or Spirits Owners Ask
Calif. U.K./Cont.*	20/6	20/-21/	21/	20/-21/
Gulf-U.K./Cont.*	13/9	14/-15/	14/3	14/6-15/
Calif.-N. Atlantic (not E. of N. Y.)	....	‡55c	42c	‡55c
Gulf-N. Atlantic** (not E. of N. Y.)	†19c	†19-20c	18c	19-20c

Note: Dirty boat quotations are enlarged to cover, "Fuel and Light Crude" quotations.

*Continental ports in range between Bordeaux and Hamburg, both inclusive.

**Venezuela loading same rate: Tampico 2c to 3c per bbl. additional.

†Rates for heavy crude or fuel 1c to 2c higher than for light crude.

‡Nominal

Four Standard Oil Men Receive Service Pins

CHICAGO, May 22.—Service pins representing 30 and 40 years' service are being awarded by the Standard Oil Co. of Indiana to four men.

Diamond set pins for 40 years' service have been received by H. R. Cochran, division manager at St. Louis, and L. C. Baldwin, printing buyer in the Chicago general office purchasing department.

Mr. Cochran started as a station clerk April 1, 1896 at Atchison, Kan. Before becoming manager at St. Louis in 1933 he was manager at Saginaw, Grand Rapids and Detroit, and assistant general manager of the eastern and of the central divisions.

Mr. Baldwin started as an office boy in the purchasing department Feb. 10, 1896.

Gold pins for 30 years' service will be awarded this month to F. T. Graham, secretary, and Walter E. Blodgett, advertising department.

Mr. Graham started May 16, 1906 as a stenographer, and is a former assistant secretary, assistant treasurer, and was elected secretary in 1927.

Mr. Blodgett started in Milwaukee as an office boy May 15, 1906. In 1919 he came to the general office, was assistant in the office of the general manager of sales, and transferred to the advertising department in 1927.

Find 35 Cars of Gasoline Misbilled as Kerosine

JACKSON, Miss.—Thirty-four tank cars of gasoline shipped into Mississippi as kerosine and consigned to a single dealer have been traced by the legislature's gas tax probe committtee, Senator J. S. Watson, of Lexington, chairman of the committee announced.

The committee traced the shipments by the car numbers, Senator Watson said, and found that the 34 cars left Louisiana and Texas refineries as gasoline and turned up in Mississippi as kerosine. The chairman said it was the greatest "find" the committee has yet made in its investigation of "misbilling."

The 34 carlot shipments were made during the period from May, 1935, through February, 1936, Senator Watson stated.

Members of the committee said the information would be turned over to J. B. Gully, the state tax collector, for use in filing suits later for recovery of the full six-cent gasoline tax on the shipments, plus the penalty of 25 per cent. The taxes claimed, an additional five cents per gallon representing the difference between thé gasoline and the kerosine tax, plus the penalties will aggregate some $17,000 Senator Watson said.

Kerosine Lamp on Farms

COLUMBUS, O.—Kerosine still is the chief illuminant in some 5,000,000 farm homes in the United States, the Ohio Petroleum Marketer, official publication of the Ohio Petroleum Marketers Association, reports.

Progress in the design of kerosine lamps at the recent national lamp show in Chicago indicated how lamps with mantle burners have replaced the old type with flickering flame, reducing the amount of defective vision among farm children.

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New Refining Patents

(*Continued from Page* 83)

Distillation. No. 2 037 677, issued April 14, 1936; filed May 15, 1930; G. C. Connolly and A. F. Wurzbacher, assignors to The Davison Chemical Corp.; two drawings; two claims.

METHOD and apparatus whereby distillation may be carried further than heretofore customary while avoiding dangerous operating conditions due to the possibility of obstructing the condensers and pipe with solid matter. This is accomplished by providing a circulation of a solvent or even a mechanically acting remover. Another object is to eliminate the step of draining the condenser of all oil after each time the still is shut down. Another feature is the provision in the condensers for a liquid seal which consists of a heavy, relatively slightly volatile products of distillation instead of the lighter benzol or the like.

* * *

Cracking. No. 2 036 965, issued April 7, 1936; filed March 4, 1931; G. C. Hargrove, assignor to Gasoline Products Co.; 4 drawings; 2 claims.

CRACKING process permitting an increase in the conversion and reaction period while maintaining a relatively low recycle ratio by removing and fractionating the first vapors formed, allowing further conversion if desired of the remaining liquid, vaporizing this latter portion at reduced pressure and fractionating the vapor fraction formed. Other objects are to obtain close control and to obtain a dry coke containing a low percentage of volatile matter.

* * *

Fractionating. No. 2 037 316, issued April 14, 1936; filed June 26, 1933; M. R. Fenske, assignor to The Pennsylvania State College; 13 diagrams; 14 claims.

METHOD and apparatus for fractionating. Among the objects is the provision for improved efficiency for its height by improved means for contacting, within a short space, a maximum of ascending vapors with a maximum of descending scrubbing liquid. A fractionating tower of the "packed" type is provided wherein such difficulties as channeling of the reflux liquid stream are obviated. A number of evenly constituted, relatively small streams of liquid reflux liquid are maintained separately against the vapors being scrubbed. A greatly reduced pressure drop between the ends of the tower is featured.

The method comprises introducing vapors, originally in a unit stream, into intimate contact with a number of substantially separately maintained and countercurrently flowing streams

of refluxing liquid, whereby the vapors are scrubbed of their heavier components, bringing scrubbed vapors into contact with a plurality of separate condensing means, thereby separately forming the separate streams of refluxing liquid, and maintaining at all times at each of the separate streams a substantially equal ratio of vapors to refluxing liquid.

* * *

Solvent extraction. No. 2 037 318, issued April 14, 1936; filed March 13, 1935; M. R. Fenske and W. B. McCluer, assignors to Pennsylvania Petroleum Research Corp.; 9 drawings; 24 claims.

METHOD and apparatus for contacting liquid phases with objects of gaining higher efficiencies by effectively contacting the liquid phases without serious channeling. This is accomplished by causing the liquids to flow through the contact zone over longitudinally arranged attenuated packing members which act as guiding elements. It has been observed that wetting of the packing members by one or more phases plays an important part in the efficiency of contact and prevention of channeling. The wetting feature makes it possible to disperse the wetting phases by virtue of its spreading out into films on the surface of the packing members.

The apparatus consists of a tower having a number of spaced vertically arranged rods, chains, or other similar elements extending through the contact zone or it may have a number of separate passageways through tubes in which the packing is placed.

* * *

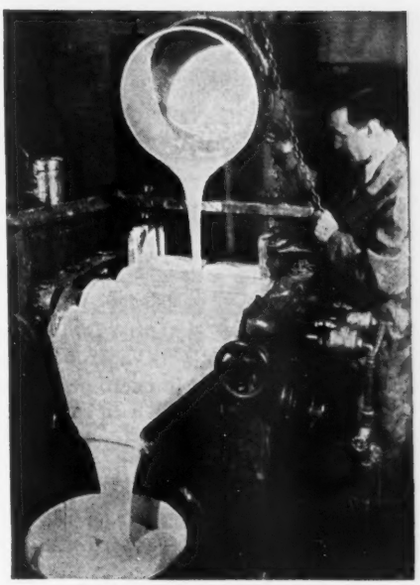
Solvent extraction. No. 2 037 319, issued April 14, 1936; filed Nov. 21, 1933; M. R. Fenske and W. B. McCluer, assignors to Pennsylvania Petroleum Research Corp.; 9 drawings; 13 claims.

A SPECIFIC form of the process and apparatus described in Patent No. 2 037 318. It is specifically adapted for the treatment of an oil with two or more solvents of different densities and particularly applicable when one solvent is lighter than the oil and another solvent is heavier than the oil.

Process for contacting at least three liquid phases of incomplete and partial miscibility to form at least two resultant phases such as in solvent treatment, comprising introduction of initial phases into a number of phase contacting paths such that at least two of the initial phases will flow countercurrently to each other by virtue of a difference of their densities, and confining each phase contacting path to a relatively small cross sectional area so as to prevent channeling.

WHY

Bakelite Resin Paints protect so much longer . . .



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WHEN correctly used in formulation of paints, varnishes and enamels, Bakelite Synthetic Resins increase the toughness, elasticity and moisture-proofness of films. They also make these coatings highly resistant to the destructive actions of acids and chemical fumes, oil, gasoline, sea air and water, and climatic and temperature variations.

Bakelite Resins impart to anti-corrosive primers, tank paints, pump enamels, and tank truck finishes, added resistance to sulphur, oil, brine, abrasion and sunlight. This results in important economies, both in gallonage required and labor costs.

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Special Bakelite Resin coatings for many exacting needs of the petroleum industry are now made by leading paint and varnish manufacturers. For detailed information, write for our booklet 29S, "Bakelite Synthetic Resins".

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Four hundred pages of wisdom in the operation of automotive equipment especially valuable to operators of fleets of trucks and passenger cars but well worth reading by private car owners.

The reader is given the essentials in accounting with consideration of the factors of insurance, depreciation, inspection and maintenance, and service records.

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Order your copy, price $3.00, from the Book Department

NATIONAL PETROLEUM NEWS, 1213 W. 3rd St., Cleveland, Ohio

Automotive Notes and Comments

By JOHN W. THOMPSON

N. P. N. Staff Writer

IT MAY be within the bounds of truth to say that the automotive engineer's life is a bed of roses, if we add that his bed also includes the thorns as well as the blossoms. His job demands mental tension. His brain is pulled one way in an effort to determine what he will design for next year, and pulled in the opposite direction in an effort to find out what his competitors will design for next year.

Like the oboe player, the column writer, and the radio announcer, he is given to talking to himself on street cars, speaking out of turn in his sleep, bringing presents to his wife, and other unnatural symptoms.

Although this department has never seen an automotive engineer roll and toss in bed through night after night of restless sleep as a result of worry over next year's models, we understand that it is not an uncommon occurrence.

While no official figures are available, it is believed by some that Charles F. Kettering, able General Motors director of research, has been the cause of more sleepless nights among automotive engineers than have all the automotive conventions in the last ten years.

He has a reputation of saying something whenever he talks, a mark of true greatness in any man. So when he says, "I cannot help but feel that in a very short time we are going to break loose another great piece of basic information which will keep us industrially busy for a great many years to come," all the engineers in Detroit roll and toss as one and mumble in their sleep, "who does he mean when he says 'we are going to break loose' " and "what basic information is he talking about."

Kettering also says, "it is not what we know that is so important; it is what we do not know." Whatever else may be said of that remark, it is most certainly a break for the conductor of a column such as this.

Acting on the above interpretation of "important," our we-do-not-know-for-sure-but-we-have-heard department reports:

THAT Chevrolet will have an entirely new engine between the thills of its 1937 carriages.

THAT Ford will again threaten to dust off his low-priced four cylinder job to scare the boys next year.

THAT the floor tunnel will be eliminated on many of the new models, which means more hypoid rear axles—and more E. P. lubricants. Dodge is now changing over to hypoids and Plymouth is expected to follow.

THAT the automatic cruising gear has taken hold and will be more in evidence next year.

THAT the present push-and-pull gear shift lever is destined for an early burial and in its place will come the finger-tip automatic shift.

THAT the uphill job of selling wood-and-steel bodies is becoming quite a nervous strain, so Fisher Body will pull its hat down over its eyes and go all-steel soon.

AND THAT the boys who have been stationed at Packard's front door to issue denials to all inquiries about a new low-priced Packard, have been called off and put to work on it.

* * *

Our Progress-In-Spite-Of-Prosperity editor reports things are definitely for the better along automotive row. A Detroit Dodge dealer, Harry Shorter, has just made a survey to determine who buys cars. Not long ago the question was not, "Who buys cars?", but "Does anybody buy cars?"

His retail deliveries since the first of the year were the basis for the analysis. The result revealed that 30 per cent of his customers are salesmen, 18 per cent are factory workers and mechanics, and 13 per cent are office workers. In other words, these three classifications accounted for 61 per cent of this dealer's business.

Housewives represented 10 per cent of the customers, merchants 9 per cent, and truck drivers 5 per cent. Herein, of course, lies a hint as to who buys gasoline and oil.

* * *

The steady growth over the last few years of the home-on-wheels type of trailer for touring and vacationing is worthy of consideration by oil companies. Trailer builders report growing lists of dealers and mounting sales, and there is a distinct trend to factory-built units instead of the former home-made jobs.

The trailer-travel-trend is reaching out into the monied classes and a number of luxurious jobs are appearing on the roads. Great improvement in tourist camps has been a factor in the trailer development.

The March-April issue of Trailer Travel mentions a camp in Los Angeles which has brick walls 20 feet apart to insure privacy. The camp also provides individual bath and sanitary facilities, private laundry, early morning milk delivery, not to mention butter and eggs, and the morning paper. (What, no valet?)

For a rate of $1.50 to $2 per week, there are many camps in practically all states offering electricity, pure water, showers, beaches, ovens, playgrounds, and in some cases, medical and dental assistance.

If any oil companies would be interested in increasing the consumption of gasoline and oil, instead of merely taking existing gasoline business away from another company, then trailer travel is one means to that end. Some even go so far as to believe that a "travel by trailer" type of sales appeal will sell more of an oil company's gasoline than will the tried and trite "more miles per gallon" theme.

* * *

Automotive service men, always on the lookout for "gravy profits" to pass along to their dealers, are focusing in ever increasing numbers upon lubrication service. Automobile dealers are being urged by car manufacturers to set up modern lubrication facilities in their buildings for two reasons—(1) because of the profit in that type of service, and (2) because they have found that a properly operated lubrication business always increases parts, accessory, and general service sales, as well as providing a continuous contact with the customer.

Oil companies will make a mistake if they overlook the methods and growth of lubrication by car dealers. Factory controlled branches are taking the lead in this development and are surrounding their lubritoriums with a touch of showmanship. Uniform signs and banners, canopies, brightly painted floors, and bright clean equipment are fundamental to these layouts.

Oil companies who have been worrying about competing with each other for lubrication business can now consolidate their worries and bite their nails over this car dealer competition.

DeSoto has recently produced a booklet for its dealers—"The ABC of Approved Lubrication," in which profits from this service are glorified to the extent that reading of it by an oil man should cure his disillusionment over his lubrication business and make him go right out and kick a policeman.

This booklet confides that lubrication is the largest single part of the automotive service market, and that it accounts for 25 cents out of every

service dollar spent by the customer. From a profit standpoint, DeSoto points out to its dealers that more than 50 per cent of a lubrication sale is gross profit, and that, per dollar invested, lubrication equipment will "earn more money for you than any other tools you might buy."

The DeSoto ABC book figures it out that the lubrication of just one car a day will bring the dealer a monthly profit of $25.71, based on a 25-work-day month. It is pointed out that the income from this work, figuring in chassis lubrication at $1 per car and including engine oil, gear lubrication, and wheel bearings, totals $51.30, while the costs are only $25.59.

The ABC booklet has been misnamed. It was not written for Miss Tilliewiddy's primary class; it is worthy of mental digestion by the mighty tycoons of oil.

NEW PATENTS

Prepared by R. E. Burnham, patent and trade-mark attorney, 511 Eleventh street, N. W., Washington, D. C., from whom copies may be obtained at the rate of 25c each. State number of patent and name of inventor when ordering.

May 5, 1936

REFINING

Conversion of hydrocarbon oils—Joseph G. Alther, Chicago, Ill., assignor to Universal Oil Products Co. Filed Oct. 3, 1932. No. 2,039,379.

Treatment of hydrocarbon gases—Jacque C. Morrell, Chicago, Ill., assignor to Universal Oil Products Co. Filed Aug. 31, 1932, and Jan. 19, 1933. Nos. 2,039,440 and 2,039,441.

Process for treating hydrocarbons—Jean D. Seguy, Chicago, Ill., assignor to Universal Oil Products Co. Filed Dec. 14, 1932. No. 2,039,459.

Process and apparatus for cracking oil—Andrew L. Still, Los Angeles, Calif. Filed Mar. 26, 1929. No. 2,039,611.

Process for dewaxing oil—Lyle Dillon, Los Angeles, and Claude E. Swift, Glendale, Calif., assignors to Union Oil Co. Filed July 24, 1933. No. 2,039,636.

Method of coking liquid hydrocarbons—Charles W. Andrews, Chicago, Ill., and Roy S. Petersen, San Antonio, Tex., assignors to Brassert-Tidewater Development Corp. Filed July 5, 1932. No. 2,039,763.

Hydrocarbon oil conversion—Lyman C. Huff, Chicago, Ill., assignor to Universal Oil Products Co. Filed Jan. 14, 1933. No. 2,039,797.

Treatment of hydrocarbon oils and treatment of hydrocarbons—Vladimir Ipatieff, Chicago, Ill., assignor to Universal Oil Products Co. Filed Feb. 11, 1933, and Dec. 4, 1933. Nos. 2,039,798 and 2,039,799.

Method of coking hydrocarbons—Roy S. Petersen and Charles W. Andrews, assignors to Brassert-Tidewater Development Corp. Filed Dec. 18, 1933. No. 2,039,835.

Process of improving motor fuels—John C. Geniesse, Ridley Park, and Raymond Reuter, Philadelphia, Pa., assignors to Atlantic Refining Co. Filed Mar. 9, 1928. No. 2,039,894.

Refining of mineral oil distillates—Joseph B. Hill, Philadelphia, Pa., assignor to Gray Processes Corp. Filed June 21, 1926. No. 2,039,904.

Apparatus for distillation of dry cleaning fluid—Alfred Jones, London, England, assignor to W. M. Still & Sons, Ltd., same place. Filed Mar. 30, 1934. No. 2,039,963.

Distillation of hydrocarbon oils—Max G. Paulus and Andrew E. Thompson, Casper, Wyo., assignors to Standard Oil Co. (Ind.). Filed Oct. 16, 1930. No. 2,039,979.

Process for treating hydrocarbon oils—Ernest W. Rembert, Plainfield, N. J., assignor of three-fourths to Tidewater Oil Co. Filed July 22, 1932. No. 2,039,981.

Method of treating hydrocarbon oil—Arthur C. Hampton, Belleville, N. J., assignor to Gasoline Products Co. Filed May 10,1933. No. 2,040,048.

Dewaxing hydrocarbon oil—Robert E. Manley, Beacon, N. Y., assignor to Texas Co. Filed June 13, 1932. No. 2,040,056.

Treating hydrocarbon oils—Albert G. Peterkin, Jr., Bryn Mawr, Pa., assignor to Atlantic Refining Co. Filed Aug. 29, 1931. No. 2,040,064.

MISCELLANEOUS

Hard water soluble oil—Elmer W. Adams, Hammond, Ind., and George W. Flint, Chicago, Ill., assignors to Standard Oil Co. (Ind.). Filed May 20, 1933. No. 2,039,377.

Method of treating hydrocarbon motor fuels and products resulting therefrom—George W. Ayers, Jr., Chicago, Ill., assignor to Gasoline Antioxidant Co. Filed Oct. 1, 1934. No. 2,039,576.

Method of treating hydrocarbon motor fuels—Julius Hyman and George W. Ayers, Jr., assignors to Gasoline Antioxidant Co. Filed Jan. 18, 1930. No. 2,039,595.

Sulphonation of oils and greases—Alexander Gressner, Habana, Cuba. Filed May 29, 1934. No. 2,039,989.

May 12, 1936

REFINING

Process for production of lubricating oils—Ulric B. Bray, Palos Verdes Estates, and Claude E. Swift, Glendale, Calif., assignors to Union Oil Co. Filed Feb. 13, 1934. No. 2,040,239.

Treatment of hydrocarbon oils—Gustav Egloff and Jacque C. Morrell, Chicago, Ill., assignors to Universal Oil Products Co. Filed Jan. 12, 1934, Dec. 19, 1931, and Dec. 26, 1931. Nos. 2,040,366, 2,040,395, and 2,040,396.

Catalytic process (polymerization of unsaturated olefin)—Ward E. Kuentzel, Whiting, Ind., and Theodore A. Geissman, Minneapolis, Minn., assignors to Standard Oil Co. (Ind.). Filed Nov. 8, 1934. No. 2,040,658.

MISCELLANEOUS

Process for manufacture of acetone—Hermanus F. J. Lorang, Amsterdam, Netherlands, assignor to Shell Development Co. Filed Oct. 8, 1930. No. 2,039,543.

Fluid-dispensing device—William H. D. Brouse, Toronto, Ont., Canada, assignor to John Wood Mfg. Co., Conshohocken, Pa. Filed July 17, 1931. No. 2,040,815.

Frank Rocchio Heads Sales

LOS ANGELES, May 21.—Smith-Johnson Corp., Los Angeles, announces the appointment of Frank Rocchio as general sales manager, replacing Arthur H. Forsman, who has resigned. Rocchio has been identified with the sale of Smith-Johnson products for the past three years and is well known to the trade.

Calumet cooperates!

. . . by offering, under popular brand names, every lube oil, grease and petroleum specialty that you can think of.

. . . by maintaining a "custom-trade" service to provide lube oils made precisely to your specifications and delivered just as you require.

. . . by extending at all times a comprehensive sales and advertising help program that is bringing vast benefits to our hundreds of jobbers and thousands of dealers.

For full facts, write

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Branch: 1103 W. 11th St., Cleveland, Ohio

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Every step in advertising is worked out for you—it is easily the most authoritative—the most interesting—the most complete course available.

Write today for free, explanatory booklet, on your company letterhead, and state your position

VINCENT EDWARDS ADVERTISING COURSE

342 Madison Ave.
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At 3 Cents Per Day!

HERE'S how one oil man saves himself time, money and temper.

"Every time I'd go to look for a back price, invariably that issue of National Petroleum News was missing from our files. *Now* all I have to do is to reach for the OIL PRICE HANDBOOK and I have the 1935 price of any refinery, tank wagon, Chicago tank car, export, seaboard and crude market . . . in a jiffy.

"It saves me time, money and temper."

This "saving of time" is a big item. Stop for a moment to figure out the saving if every man in your organization who refers to back prices had an OIL PRICE HANDBOOK at his elbow. He wouldn't even have to get up from his chair to get any 1935 price he needed.

In a year's time, if he looked up only one price a day in the OIL PRICE HANDBOOK, it would cost you about *3 cents per day*.

Compare this with your present cost of recording and referring to back prices on Refinery, Tankwagon, Chicago Tank Car, Export, Seaboard and Crude Markets!

How many men in your organization should have a copy of the 1935 OIL PRICE HANDBOOK at their elbow? Special rates in quantity. Send your order in promptly before the supply of this price-book is exhausted.

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NATIONAL PETROLEUM NEWS
Penton Bldg., Cleveland, Ohio

Send.....copies of the 1935 OIL PRICE HANDBOOK and Refinery Directory. Single copy $10 postpaid.

(On order of 5 copies special discount of 5%; 10 or more copies 10% discount; 50 or more copies 20%, payable in advance.)

NAME.....

Address.....

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NEW BOOKS

Oil Heating Handbook

Oil Heating Handbook is said to be the only volume which answers every question the home owner asks about oil heating, explains thoroughly and impartially the principles, installation and maintenance of oil burners, and provides students and oil burner men as well as home owners with simple, concise definitions of every word used in connection with heating engineering.

Han A. Kunitz, author of the handbook, has translated the technical data of this growing industry into everyday language clear to student or experienced oil burner man. He has incorporated in the book all the essential information which he would like men working for him to know about heating and oil burners.

Any of several original charts which are included save the necessity for making complicated mathematical calculations such as the determination of how grades of oil from No. 2 to No. 6 compare with coal at any price and at any given heating value per ton. Another chart which has never appeared in print before is the service chart which immediately enables a man to put his finger on any trouble with the burner or heating system.

Starting off with a short introductory chapter and a description of a typical oil burner installation, the book divides into four main divisions. Part II deals with fuels and combustion, Part III specifically with heating, including operative controls, Part IV with installation and operation of oil burners, and Part V with retail sales.

The choice of material was made from the viewpoint of giving the necessary technical background to all those interested in oil burners of rather moderate size, devoting a generous portion of the available space to combustion, to tabular information needed for every-day work, and to a digest of heating systems. A chapter on noise and vibration was included because only a limited amount of necessary printed information has been published from an oil burner standpoint. In the chapters on sales, retail sales, being of interest to a majority, were accorded most of the space.

Oil Heating Handbook is available in the book department of National Petroleum News. Its price is $3.50.

G. K. Squier has been elected vice-president and general manager of The Lubrication Corp., Chicago, succeeding W. B. Plummer, who becomes president. Other appointments include J. P. Stocker as assistant sales manager, and M. A. McNulty as secretary.

INTERESTING TRADE ITEMS

Battery Sales

With new merchandising and advertising ideas and plans by which they expect to increase battery sales next fall, members of the sales and advertising departments of The Electric Storage Battery Co. will leave Philadelphia May 31 for a swing around the country. They will hold sales meetings in various cities with the 300 Exide wholesalers and their personnel.

The party includes F. T. Kalas, assistant general sales manager; A. N. Dingee, advertising manager; R. L. Sommerville, manager of automotive replacement battery sales; and his sales promotion assistants, R. C. Rudisill, and John Damon; and N. W. Geare, president of the Geare-Marston Co., advertising agency handling the Exide account.

* * *

American Pumps Inc.

Official announcement has been made of the organization of a new corporation, to be known as American Pumps Inc., to take over the entire business of The American Oil Pump & Tank Co. of Cincinnati, manufacturers of gasoline pumps and service station equipment for over 20 years.

While the executive management is radically different, it is stated that the engineering and production staff has been retained intact. R. E. Schlegel, prominent Cincinnati manufacturer, who has been serving as trustee pending re-organization, is president of the new company. J. E. Jones of Richmond, Ind., is vice-president and J. H. Timmers, long connected with the industry, is secretary and treasurer.

* * *

Linestarter

A complete new line of linestarters employing the De-ion principle of arc interruption has been announced by the Westinghouse Electric and Mfg. Co., East Pittsburgh. Designed for across-the-line starting for single phase and polyphase squirrel cage induction motors and as primary switches for wound rotor induction motors, they are said to be especially applicable where push button control is desired with complete protection to the operator, the motor and the machine.

* * *

New Pilots' Handbook

A completely revised edition of the Stanavo Pilots' Handbook has just come off the press and is currently being mailed to all licensed pilots in the United States, according to an announcement made yesterday by the Aviation Department of the Standard Oil Co. of New Jersey.

This book has been distributed annually to pilots since 1930.

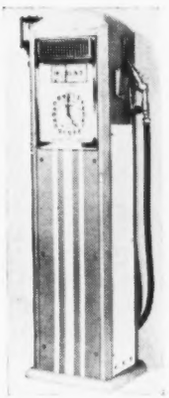
Recorder-Controller

The Bristol Co., Waterbury, Conn., is announcing a new series of pneumatic-type controllers known as Ampliset Free-Vane Controllers. Certain features of field adjustability have been added whereby sensitivity can be changed with a screw driver to fit the lag peculiarities of the process on which it is used. The new instrument is described in bulletin No. 440.

* * *

Gasoline Pump

A new Sharmeter automatic gasoline Pump model No. 37 has just been announced by Sharpsville Boiler Works Co., Sharpsville, Pa. Among its features are automatic nozzle power control, air eliminator pressure equalizer, trouble detector and self priming. The Neptune Red Seal cash-recording meter which computes any fraction of a cent per gallon and permits instant change of price tabs without adjustment is standard equipment.



Particular attention is called to the streamline design which permits striking decorations in colored enamel finishes. Trimmings are chromium plated.

* * *

Rotary Hose

Engineers of Thermoid Rubber Co., Trenton, have developed a Rotary Hose which is said to nearly double the usual bursting test pressure. The principal improvement is the result of a specially designed automatic wire winder which applies wires to the hose at a predetermined angle, assuring equal and proper tension and close uniform spacing. Bursting pressures of 8000 or 10,000 pounds have been applied in tests without rupture.

* * *

Pump Catalog

Ingersoll-Rand catalog 7502-E covers the company's "Type 30" line of industrial compressors and vacuum pumps. Single and two-stage compressors are included with power units from one quarter to 15 horsepower. Displacements range from 1.2 to 102 cubic feet

The Accepted Standards of Pennsylvania Bright Stock Excellence Since 1900

H-M and L-M Oils Are Made Solely By

THE CONEWANGO REFINING CO.

Warren, Pa.

TRANSACTIONS IN OIL STOCKS ON NEW YORK STOCK EXCHANGE

1935 High	1935 Low	1936 High	1936 Low	Listed Shares	Par Value	Company	Current Dividend	Last Div. Paid	Transactions Week Ended May 23 Sales Shares	High	Low	Last	Week's Change
80	48½	125	75	788,675	N.P.	Amerada Corp.	50cQ	Jan. 31, 36	2,800	94½	87½	94	— 1
44	29¾	51⅛	36	2,290,412	$25	Associated Oil Co.	25c	May 1, 36	10	36	†36	36	— 1
28	20½	35⅛	27⅛	2,696,652	25	Atlantic Refining Co.	25cQ	Mar. 16, 36	6,700	29¼	27⅜	28½	— ⅜
14¾	5⅞	20	14⅛	2,258,779	5	Barnsdall Corp.	20c	May 1, 36	11,400	17⅞	16⅛	17	— ¾
9⅞	6¾	24¾	8¼	1,444,970	N.P.	Colonial Beacon Oil Co.	....	....	390	18½	17	17	— 1¾
12¼	6½	15¼	11½	13,996,072	N.P.	Consolidated Oil Corp.	25c	Apr. 1, 36	54,200	13¼	11⅞	12⅛	— ½
112½	108½	105½	101	132,771	$100	do pfd.	$1.25Q	Mar. 15, 36	100	104¾	104¾	104⅜	+ ⅝
35	15⅛	38½	29	4,722,652	5	Continental Oil Co.	25c	Apr. 30, 36	16,900	32	†29	30¼	— 2¼
22½	11¾	34¾	22	413,333	$10	General Asphalt Co.	....	....	2,000	25⅝	24¼	25⅜	— ⅛
17¾	9¼	....	....	95,841	100	Houston Oil Co.	....	....	....	....	....	....	....
7	1½	12¼	6⅜	678,234	25	do v.t.c.	....	....	5,000	9	8⅛	8½	— ⅜
5¼	2⅛	8⅜	4⅛	1,207,132	10	Indian Refining Co.	....	....	900	10¾	10	10	— ⅜
1⅞	⅜	....	....	1,309,060	N.P.	Louisiana Oil Ref'g. Corp.	....	....	....	....	....	....	....
15	4½	34½	13	40,000	$100	do pfd.	....	....	3,310	41½	27½	41½	+12
3	1	6¾	2½	330,000	N.P.	Maracaibo Oil Exploration Co.	....	....	600	4	3¾	4	— ⅛
20½	9½	23	17¼	1,857,912	$10	Mid-Continent Pet. Corp.	25c	Dec. 2, 35	4,000	19¾	18½	19⅛	— ¾
14¾	9¼	17½	12½	6,563,377	N.P.	Ohio Oil Co.	15c	Dec. 14, 35	14,600	13⅝	12½	13⅛	— ⅜
21	10¾	20⅝	14½	4,699,885	$5	Pan Amer. Pet. & Transp. Co.	....	....	....	....	....	....	....
1⅞	½	4¼	1⅜	199,370	N.P.	Panhandle Prod. & Ref'g. Co.	....	....	200	3	2¾	3	+ ½
20	6½	74½	18½	17,994	$100	do pfd.	....	....	10	63	63	63	— 1
14	7⅝	18	12½	2,153,444	5	Petroleum Corp. of America	33c	Oct. 31, 35	3,900	13½	†12½	13⅛	0
40	13¾	49⅜	38⅛	4,439,450	N.P.	Phillips Petroleum Co.	25cQC	Feb. 29, 36	24,200	42¾	38⅞	41	— 1¾
1¼	¼	2¼	⅞	1,184,817	$25	Pierce Oil Corp.	....	....	....	....	....	....	....
8	2¾	17	8	150,000	100	do pfd.	....	....	1,700	12⅞	11¼	11⅛	— 1½
1¾	⅝	2½	1½	2,500,000	N.P.	Pierce Petroleum Corp.	....	....	2,500	2	1¾	1⅞	— ⅛
13	6½	16½	11⅞	1,050,000	$5	Plymouth Oil	25cQ	Mar. 30, 35	9,100	14⅝	13⅜	14⅜	0
17	5⅞	24⅞	16⅝	3,038,370	N.P.	Pure Oil Co.	....	....	26,000	19¼	17½	18¼	— 1⅛
103	34¾	118	91¼	167,640	100	do 6% pfd.	$19.125d	Apr. 20, 36	900	96	94¾	94¾	— ¾
119⅞	49⅝	133½	103	130,000	100	do 8% pfd.	$25.50d	Apr. 20, 36	470	106½	104	104½	— 2½
48½	29½	57⅝	48⅜	425,342	a	Royal Dutch Co. (N. Y. shares)	$1.70	Aug. 1, 35	....	....	....	....	....
36⅞	20¾	42½	31¼	1,244,383	N.P.	Seaboard Oil of Del.	25c	Mar. 14, 36	3,600	33¾	†31¼	31⅞	— 1¾
39	20⅜	48	38½	56,148	£2	Shell Transport & Trading Co.	$1.237	July 24, 35	....	....	....	....	....
16½	5½	19¼	14¾	13,070,625	N.P.	Shell Union Oil Corp.	....	....	30,700	17⅞	16⅜	17⅛	— ⅝
111	63⅛	120	110½	400,000	$100	do pfd. w.w.	....	....	1,000	115½	113¼	115	— ¾
18¾	4¾	6¾	4⅝	461,000	10	Simms Petroleum Co.	**$1.00	Jan. 27, 36	1,600	5¼	5⅛	5¼	0
20½	6½	31½	19½	1,100,069	25	Skelly Oil Co.	....	....	2,400	25½	23⅜	24⅛	— ⅞
116¼	60	132	116	120,000	100	do pfd.	....	....	200	122½	121	121	— 1
15¾	10⅝	17	12½	31,701,348	15	Socony Vacuum Oil Co.	20c	Mar. 16, 36	36,200	13	†12½	12¾	— ¼
116	111	113½	111⅞	764,925	100	S. O. Export Corp. pfd.	$2.50 S.A.	June 29, 35	4,500	112¼	112⅛	112¼	0
41⅛	27¾	47⅝	35⅞	13,102,900	N.P.	S. O. California	30c	Mar. 16, 36	20,600	38⅜	†35⅞	37¾	— ⅝
33⅜	23	40⅛	32¾	15,215,677	$25	S. O. Indiana	25c	Mar. 16, 36	11,700	35	33⅛	33⅝	— 1¼
32	20	30	25	146,542	10	S. O. Kansas	50c	Oct. 31, 34	....	....	....	....	....
52⅜	35¾	70	51⅛	25,740,965	25	S. O. New Jersey	75c	Dec. 16, 35	31,900	61	56¾	58¾	— 2¼
77	60½	91	72	1,590,406	N.P.	Sun Oil Co.	25cQ	Mar. 16, 36	800	82½	80	80¾	+ 1
121	115½	124	118	100,000	$100	do pfd.	$1.50Q	Mar. 2, 36	....	....	....	....	....
3½	1⅝	6¾	3	966,979	$1	Superior Oil Corp. (Del.)	....	....	7,000	4⅞	4¼	4⅜	— ⅜
30¼	16½	39½	28⅞	9,851,236	$25	The Texas Corp.	25cQ	Apr. 1, 36	16,100	34¾	32	34¼	— ½
9¼	3¼	15¼	7½	930,570	10	Texas Pacific Coal & Oil Co.	....	....	10,700	10¾	9⅞	10½	0
15⅞	7⅝	19⅛	14¾	5,998,919	N.P.	Tide Water Associated Oil Co.	25c	Jan. 15, 36	9,500	16½	15½	15⅝	— ⅜
104½	84	106½	100⅝	695,503	$100	do pfd. C. T. V.	$1.50	Apr. 1, 36	900	104⅞	104¼	104½	— ½
48	26¾	60	52	2,191,823	N.P.	Tide Water Oil Co.	50c	May 11, 36	10	55	55	55	0
24	14¾	28½	20⅞	4,386,070	25	Union Oil of California	25cQ	May 9, 36	5,900	23½	21¾	22	— 1½
26½	20¼	31⅝	22⅝	1,200,000	N.P.	Union Tank Car Co.	30cQ	Mar. 2, 36	1,200	24⅝	24¼	24¼	— ⅜
1⅝	⅝	2⅞	1⅛	759,538	N.P.	Warner Quinlan Co.	....	....	1,800	1½	1¼	1¼	— ¼
3⅛	1	5¼	2¾	431,443	$5	H. F. Wilcox Oil & Gas Co.	....	....	3,200	4⅝	4⅛	4⅜	— ¼

*New high. †New low. x Ex-div. **Dividends of liquidation. ‡Stock dividend. a Par 33 1/3 florins.
C Paid 25c extra Feb. 20, 36. d on accumulations under special plan.

STANDARD OIL STOCKS ON NEW YORK CURB MARKET

1935 High	1935 Low	1936 High	1936 Low	Shares Issued	Par Value	Company	Current Dividend	Last Div. Paid	Transactions Week Ended May 23 Sales Shares	High	Low	Last	Week's Change
16	6	18	12¼	36,000	$25	Borne Scrymser Co.	50c	Apr. 15, 36	150	13⅛	13	13	— ⅛
42½	30½	50	39¾	200,000	50	Buckeye Pipe Line Co.	75cQ	Mar. 14, 36	300	44	43	44	+ 2
157	115	124¾	108⅞	120,000	25	Chesebrough Mfg. Co.	$1.50	Mar. 31, 36	400	109¾	†108⅞	109¾	+ 1½
23¾	10	34¾	19⅞	5,977,873	N.P.	Creole Petroleum Co.	20c	Dec. 31, 35	13,300	28¼	26	26⅝	— 1⅜
38	33¼	44	39	50,000	$50	Eureka Pipe Line Co.	$1Q	May 1, 36	....	....	....	....	....
64	44	76½	62½	8,968,479	N.P.	Humble Oil & Refg. Co.	25cQ	Apr. 1, 36	5,000	60½	57¼	59⅝	— ⅜
22½	15⅜	24½	20	26,919,871	N.P.	Imperial Oil Ltd.	‡25cS.	Dec. 2, 35	6,200	22¾	21⅝	22	— ½
22½	15⅞	24⅜	20½		N.P.	do registered	25cQ	June 1, 34	600	22¼	21¾	22¼	— ¼
6¼	3⅜	9¼	5½	300,000	$10	Indiana Pipe Line Co.	20c**	May 15, 36	100	7	7	7	+ ¼
39⅜	28	39⅜	33½	14,324,088	N.P.	International Pet. Co.	‡75cS.	Dec. 2, 35	6,800	37¾	36¾	37⅛	— ¾
						do registered	....	....	....	....	....	....	....
10¾	6¾	15⅞	9⅝	509,000	$12.50	National Transit Co.	35c	Dec. 15, 34	2,600	10½	†9⅝	10	— ½
4⅞	3	6¼	4½	100,000	5	New York Transit Co.	15c S.A.	Oct. 15, 34	....	....	....	....	....
8	5¼	9¼	6¼	120,000	10	Northern Pipe Line Co.	25c S.A.	Jan. 2, 35	100	5¼	5¼	5¼	0
107¼	90¼	109¼	104½	562,122	100	Ohio Oil Co. pfd.	$1.50Q	Mar. 14, 36	600	108½	108⅜	108½	+ ¼
11	5½	8	5¾	400,000	25	Penn Mex. Fuel Co.	....	Dec. 22, 33	300	5¾	5¾	5¾	0
34⅛	21⅝	40½	32½	1,200,000	25	South Penn Oil Co.	50c	Mar. 31, 36	1,600	35¾	34½	35¾	+ ¾
5	3⅞	7⅞	4⅝	100,000	10	Southern Pipe Line Co.	15c	Mar. 2, 36	200	5⅜	5¼	5⅜	+ ⅛
56	45¼	58	54	35,000	50	South West Pa. Pipe Lines	$1Q††	Dec. 31, 35	50	55	55	55	— 1
24	18	23⅜	17⅛	2,604,790	10	S. O. Kentucky	25c	Mar. 16, 36	3,300	19⅛	17½	18⅞	+ 1¼
12	7¾	14⅜	12	188,403	25	S. O. Nebraska	....	June 20, 34	700	12¼	†12	12	— ½
23⅛	11⅓	36¼	21¾	753,740	25	S. O. Ohio	....	Apr. 16, 34	1,600	29	27½	28	— 1½
99⅛	89	105	97	120,000	100	do 5% pfd.	$1.25Q	Apr. 15, 36	....	....	....	....	....
6	2¼	6¼	5⅛	34,158	25	Swan Finch Oil Corp.	87½c	Mar. 16, 36	....	....	....	....	....

*New high. †New low. ‡Imperial Oil Spec. 37½c Dec. 2, 35. Internationa Pet. Spec. 50c Dec. 2, 35.
x Ex dividend. **15c regular; 5c extra. ††Paid $1 extra Dec. 31, 35.

per minute and pressures up to 1000 pounds and vacuums to within 0.35 inches of mercury are available. Units mounted on horizontal and vertical tanks are shown as well as units unmounted and mounted on carriages.

* * *

Gear-Case Cleaner

Introduction by ARO Equipment Corp., Bryan, Ohio, of air operated flushing unit for gear-cases, for service stations whose business has not reached the point where a large investment is justifiable, is announced. The ARO flusher is light enough to be held in one hand and is simple to operate, it is said.

NEW YORK CURB BONDS

Week Ending May 23

	High	Low	Last	Change
Cities Serv. 5s '50	78¾	77	77½	0
Cities Serv. 5s '66	78¼	77¾	78	+1½
Cities Serv. G. 5½s '42	101¼	100⅝	100¾	0
Empire O & R 5½s '42	85⅞	84⅝	85	— ¼
Gulf Oil 5s '47	105⅝	105¼	105⅝	+ ½
Valvoline Oil 7s '37	98½	98⅜	98½	+ ¼

OIL AND ROYALTY STOCKS ON NEW YORK CURB

1935 High	1935 Low	1936 High	1936 Low	Par Value	Company	Transactions Week Ended May 23 Sales Shares	High	Low	Last	Week's Change
¾	⅛	1⅛	⅛	N.P.	American Maracaibo	8,700	1½	1¼	1⅜	— ⅛
3⅛	⅝	7⅝	3¼	N.P.	Arkansas Nat. Gas	1,600	6	5⅝	6	0
3¾	⅝	7¾	3¼	N.P.	do A	7,700	6⅛	5⅝	6	0
7⅛	2¼	9⅜	7⅛	$10	do pfd	1,000	8	7⅞	7⅞	— ⅛
16¾	14½	27½	16½	N.P.	British Amer. Oil coup.	400	23¼	23	23¼	+ ¼
4¼	1⅝	4¼	2½	$¼	Carib Syndicate	16,600	3½	3	3⅛	— ½
3¼	¼	7⅝	3	N.P.	Cities Service	34,200	4⅝	4¼	4¼	— ¼
47¼	6½	58¼	41½	$100	do pfd	2,000	51¾	48	49¼	— 2¼
4⅜	⅝	6⅜	3¾	10	do pfd. B	100	4	4	4	+ ¼
43	6	54	42	100	do pfd. BB	10	43	43	43	— 2
2⅛	⅛	4	1⅛	N.P.	Colon Oil Corp.	12,900	2½	1⅞	2⅛	+ ⅛
1½	⅛	5½	⅛	N.P.	Columbia Oil & Gas vtc.	5,100	4	3½	3¾	— ¼
3	1	5	2½	$1	Consolidated Royalty	100	2⅜	2⅜	2⅜	+ ⅜
1⅛	¼	4⅛	1½	N.P.	Coseden Oil	7,500	3	2	2⅝	+ ⅛
6¼	¾	17	6½	$100	do pfd	800	12	9¼	11¾	+ 1¾
2⅛	⅜	2¾	1¾	N.P.	Crown Central Pet.	3,800	2⅜	2⅛	2⅛	— ¼
8⅛	4	12	9	N.P.	Darby Petroleum	400	10⅛	10	10½	+ ⅛
2	¾	4⅜	1⅛	N.P.	Derby Oil & Refg.	400	3⅜	3¼	3¼	— ⅛
20	20	49¼	25½	N.P.	do pfd					
74¾	50¼	98	72	$25	Gulf Oil Corp.	5,700	82	77½	80	— 2¼
4¼	1⅜	6¼	3¼	N.P.	Indian Ter. Illg. Oil A					
4¼	1⅜	6½	3¼	N.P.	do B					
3	1⅛	5⅝	2⅜	N.P.	Kirby Petroleum	1,900	4¼	4	4	— ½
¾	¼	2	½	$25	Leonard Oil Dev.	4,700	1	¾	1⅛	+ ⅛
8¼	3½	15	7⅛	N.P.	Lion Oil Refg.	1,900	12	11	11	0
10⅞	4½	14¼	9⅞	N.P.	Lone Star Gas	2,500	12¾	11½	10⅞	— ⅝
19	4	22¼	14	N.P.	Margay Oil Co.					
2⅜	⅛	4½	1⅛	N.P.	Mexico-Ohio Oil					
3⅜	1⅛	4¾	1⅛	N.P.	Michigan Gas & Oil	700	4⅜	4¼	4¼	— ¼
3⅛	⅛	6	3	N.P.	Mid. States Pet. A vtc.	400	3¾	3⅜	3⅜	— ⅜
⅛	¼	2⅜	⅛	N.P.	do B vtc.	1,200	1⅜	1	1	— ⅛
⅛	¼	⅛	¼	$1	Mountain & Gulf					
5¾	4½	8⅜	5	10	Mountain Producers	1,800	6	5⅞	6	0
20	11¾	23	17¾	N.P.	National Fuel Gas	2,800	18¾	17⅝	18	— ½
3¼	2	4½	2⅛	$5	New Bradford Oil					
4	2	8⅝	3¾	N.P.	North Central Texas	100	6½	6½	6½	+ ½
⅛	⅛	⅛	⅛	N.P.	North European	2,700	3/16	†⅛	3/16	0
12½	9⅜	15¼	14	N.P.	Oil Stocks Ltd. A	100	14	†14	14	— ¼
4⅜	1¼	6⅝	3¼	N.P.	Pantepec oil of Venezuela	29,100	6⅛	5⅜	5¾	— ⅛
⅛	¼	1	¼	N.P.	Producers Royalty	200	1/4	1/16	1/4	0
3¾	⅛	15⅛	3	N.P.	Red Bank Oil	900	9¼	8½	8¾	— ¾
½	⅛	1½	⅛	N.P.	Reiter-Foster Oil	1,000	1/8	1/16	1/16	— 1/16
2⅛	½	2¾	1⅛	$25	Richfield Oil pfd.	500	1⅝	1½	1½	0
5	1½	19¼	4½	..	Root Petroleum	4,300	15⅝	14¾	15⅝	— ½
15⅛	8	23	14½	10	do conv. pr. pfd.	400	18⅞	18½	18⅞	+ ¼
....	....	39	36½	$10	Royalty Corp. pfd.					
2½	⅜	4¾	1⅞	N.P.	Ryan Consolidated	2,000	3⅜	3½	3½	— ⅛
1	⅛	2½	½	$10	Salt Creek Consolidated					
7½	5½	10	7	10	Salt Creek Prod.	1,800	8	7⅞	8	0
6⅞	4¾	11¼	6¼	N.P.	Southland Royalty	1,000	8¼	8	8⅛	— ⅛
2⅞	⅞	5	2⅜	$5	Sunray Oil	21,300	4¾	4⅛	4½	+ ⅛
4	2	6	4¼	$1	Swiss Oil Corp.	2,900	5	4⅝	4⅝	0
6⅛	5	9¾	4½	N.P.	Texon Oil & Land	500	6½	6¼	6¼	— ¼
....	....	....	....	....	Venezuela Mex.					
2¼	⅛	3½	1½	$5	Venezuela Petroleum	2,300	1⅞	1⅝	1¾	— ⅛
6⅛	3½	11	5⅝	1	Woodley Petroleum	700	8¾	8⅜	8½	+ ¼

*New high. †New low.

OIL DIVIDENDS

Dividends Waiting Payment

Company	Amount	Record	Payable
Atlantic Refg. Co. q	25c	May 21	June 15
Buckeye Pipe Line q	75c	May 29	June 15
Canadian Oil Cos. pfd. q	$2.00	June 20	July 1
Canfield Oil pfd. q	$1.75	June 20	June 30
Chesebrough Mfg. q	$1.00	June 5	June 29
do extra	50c	June 5	June 29
Consolidated $5 pfd. q	$1.25	May 15	June 1
Continental Oil	25c	July 6	July 31
Darby Petroleum	25c	July 3	July 15
Hancock Oil of Calif. "A" q	25c	May 15	June 1
do "B" q	25c	May 15	June 1
Humble Oil & Refg. q	25c	June 1	July 1
Imperial Oil Ltd. semi	25c	May 15	June 1
do extra	37½c	May 15	June 1
International Pet. semi	75c	May 22	June 1
do extra	50c	May 22	June 1
McColl Frontenac Oil q	20c	May 15	June 15
Mid-Continent Pet.*	40c	May 1	June 1
National Transit s	40c	May 29	June 15
Northern Pipe Line	††15c	June 12	July 1
Ohio Oil Co.**	25c	May 18	June 15
Ohio Oil pfd. q	$1.50	June 3	June 15
Pet. Corp. of America	25c	May 7	May 29
Phillips Pet. extra	25c	May 1	June 1
Phillips Pet. q	25c	May 1	June 1
Plymouth Oil resumed	25c	June 12	June 30
Seaboard Oil of Del. q	25c	June 1	June 15
Skelly Oil Co. 6% pfd†	$1.50	July 1	Aug. 1
Standard of Calif. q	25c	May 15	June 15
Standard of Calif. extra	5c	May 15	June 15
Standard of Ind. q	25c	May 15	June 15
Standard of Ind. extra	15c	May 15	June 15
Standard of Kentucky q	25c	May 29	June 15
Standard of N. J. s	50c	May 16	June 15
Standard of N. J. extra	25c	May 16	June 15
Standard of Ohio pfd. q	$1.25	June 30	July 15
Sun Oil Co. q	25c	May 25	June 15
Swiss Oil q	5c	June 15	July 1
do extra	5c	June 15	July 1
Texas Corp. q	25c	June 5	July 1
Tide Water Assoc. pfd. q	$1.50	June 10	July 1
Tide Water Assoc. Oil q	15c	May 11	June 1

*Last paid 25c Dec. 2, 35.
**Last paid 15c Dec. 14, 35.
†On accumulations.
††Paid 25c Jan. 2, 36.

PITTSBURGH STOCK EXCHANGE

Transactions Week Ended May 22, 1936

	Sales	High	Low	Last	Change Over Week
†Cities Serv	52	4½	4	4	— ¼
Col. Gas & Elec	440	19¼	18⅛	18¼	0
†Col. Oil & Gaso. VTC	550	4	4	4	+ ¼
Devonian Oil	16	19	19	19	+1
Lone Star Gas	2,383	12½	11½	11¾	— ¼
† do 6 p.c. conv. pfd	65	104	103	104	+ ½
Mountain Fuel Supply	955	5⅛	5	5	— ⅛
Phoenix Oil	1,000	.05	.05	.05	— .01
do pfd	500	.05	.05	.05	— .02
Plymouth Oil	243	14½	14¼	14½	+ ½
Shamrock Oil & Gas	1,700	4	3¾	3¾	— ¼
†Standard Oil of N. J.	323	61	57⅝	57⅞	— 2⅞
Waverly Oil Wks A	20	1¾	1¾	1¾	— ¼

†Unlisted.

NEW YORK BONDS

Week Ended May 23

	High	Low	Last	Change
Atlantic Refg. deb. 5s	105¼	104⅞	104⅞	0
Houston Oil 5½s	102⅛	101⅝	102	— ⅛
Pan Amer. Pet. of Calif. 6s	48	48	48	—1⅝
do 6s ctfs	47	45¼	46	—2¼
Pure Oil 4½s '50 w.w.	118¼	114¼	115¾	—2¼
do 4½s '50 x.w.	103¾	103⅝	103⅝	+ ⅛
Richfield Oil of Calif. 6s	40¼	40¼	40¼	— ½
do 6s ctfs	40¾	38	38	—2¼
Shell Union Oil 3½s	97	96⅜	97	+ ⅜
Skelly Oil 4s	98¾	98⅜	98⅝	+ ⅛
Socony-Vacuum 3½s '50	105	104¾	105	+ ⅛
Union Oil of Calif. 6s A	120⅜	120⅛	120⅜	+ ¼
do 4s '47	115	114	114¼	— ½
Warner-Quinlan 6s	31¾	29	29	— 2¾

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Net Earnings of 14 Oil Companies Up 74.9% in First Quarter

BASED on earnings reported by leading oil companies for the first quarter of 1936, the domestic oil industry enjoyed the most favorable operating results in this period in many years, with several companies showing record profits.

Main reasons for this improvement were: (1) higher petroleum prices throughout the country, except in California; (2) a new record volume of consumption despite unsatisfactory weather conditions; and (3) reduced funded debt charges through bond refunding and retirement programs, according to a study just made by Standard Statistics.

Retail gasoline prices east of the rockies averaged about a cent higher than in the first quarter of 1935; wholesale prices ranged from one-half to one cent higher; and crude prices were about 12 per cent higher.

Domestic motor fuel demand was 9.3 per cent higher in the first quarter as compared with the previous year.

Total net earnings of 14 oil companies which have issued quarterly reports were $20,909,458 in the first quarter of 1936 compared to $11,954,804 in the first quarter of 1935, an increase of 74.9 per cent. All of the 14 reported profits for the past quarter, while four had deficits a year ago.

	1936		1935	
	Net Income	Per Share	Net Income	Per Share
Amerada Corp.	$473,996	60c	$399,310	51c
Atlantic Refining Co.	1,983,000	74c	(d) 129,000	(d) 5c
Barnsdall Oil Co.	471,043	22c	(d) 337,839	(d) 15c
Continental Oil Co.	2,114,521	45c	940,807	20c
Mid-Continent Petroleum	942,659	51c	(d) 273,057	(d) 15c
Ohio Oil Co.	2,255,139	22c	687,812	$1.12*
Phillips Petroleum Co.	3,156,159	76c	1,542,335	37c
Plymouth Oil Co.	361,156	34c	185,833	18c
Seaboard Oil Co.	612,126	49c	439,177	35c
Shell Union Oil Corp.	1,681,984	9c	(d) 1,121,041	(d) 13c
Skelly Oil Co.	797,015	69c	297,517	20c
Standard of California	2,952,958	23c	4,891,022	37c
Tide Water Associated Oil	2,707,702	31c	1,220,991	5c
Union Oil of California	400,000	9c	1,350,000	31c
	$20,909,458		$11,954,804	

*On preferred stock.

After reviewing results of operations in the first quarter, Standard Statistics commented on the outlook for the industry over the next few months. It pointed out that the outlook for prices is essentially dependent on the statistical position of the industry. Therefore it warned against the maintenance of crude production and refinery operations at present uneconomic levels in the face of the present large supplies of gasoline on hand.

"The relative prosperity witnessed last year," the survey stated, "has engendered a certain amount of carelessness in regulating operations. Higher prices have encouraged increased production of both crude oil and gasoline and have also stimulated drilling activities which are now at the most rapid rate in years."

A factor which is expected to correct any weakening of the industry's statistical position is the prospect for another record high volume of gasoline consumption this year. With motor fuel consumption in the first quarter 9.3 per cent higher than a year ago, and an increase of more than 6 per cent forecast for the second quarter, it is estimated that an increase of between 6 and 7 per cent for the entire will be fulfilled.

In any event, the survey concludes, the outlook is now more for the maintenance of present price schedules, pending a clarification of trends in the statistical position during coming months, than for the moderate increases in crude oil and gasoline prices that had been expected earlier in the year.

Panhandle P. & R.

A plan for the recapitalization of the Panhandle Producing and Refining Co. has been worked out, and has the approval of 75 per cent of the stock ownership. A registration statement is being prepared which will be filed with the Securities and Exchange Commission.

The plan provides for funding the company's current indebtedness and readjusting its capital structure. Authorized common stock is to be increased by 300,000 shares to 1,500,000 shares, the present no-par common to be changed into a similar number of $1 par shares.

A new issue of $800,000 ten-year 6-per cent debentures would be created. These debentures to be divided into three series of varying amounts to pay off respectively, delinquent ad valorem taxes and other secured indebtedness incurred before Jan. 1, 1935; and unsecured indebtedness accruing before Jan. 1, 1935 and the balance to be exchanged for the present preferred stock in the ratio of $25 face value and in addition thereto 25 shares of common for each share of preferred stock so exchanged. Holders of the third series to have the right to convert them into common stock prior to redemption date in the ratio of 10 shares of common for each $25 face value of such debentures.

The company reported net earnings in the first quarter of 1936 of $30,430, after all charges, equal to $1.81 a share on the 16,800 shares of 8 per cent cumulative preferred outstanding. This compares with net loss of $38,056 in first quarter of 1935.

Standard of Kentucky

Estimated net income of Standard Oil Co. of Kentucky the first four months of 1936 was $1,217,000 after all charges except provision for Federal income tax. This compares with net income of $858,000 in first four months of 1935.

Swiss Oil Corp.

Report of the Swiss Oil Corp. for the four months ended April 30, 1936 shows net income of $191,470, after all charges, equal to 19 cents a share on 959,400 shares of (par $1) capital stock. This compares with net income of $73,355 or 7 cents a share the first four months of 1935.

Directors declared the regular quarterly dividend of 5 cents a share and an extra dividend of 5 cents a share, both payable July 1 to record of June 15.

Kendall Refining Co.

Kendall Refining Co., Bradford, Pa., has filed a registration statement with the Securities and Exchange Commission for the issuance of 76,200 shares of common stock. It was expected the offering price would be $15.50, according to the prospectus.

Cities Service

Cities Service Co. and subsidiaries report for first three months of 1936 shows net income of $3,094,030, after all charges including preferred dividends of subsidiaries but before year-end adjustments. This compares with net income of $1,853,033 in the first three months of 1935.

Plymouth Oil Corp.

Plymouth Oil Co. stockholders were told by President W. S. Hallanan at the annual meeting last week that earnings for the first six months of 1936 will substantially exceed the earnings

of the entire year 1935 when the company reported consolidated net income of $736,057, equal to 70 cents a share.

The company's production in May, according to Mr. Hallanan, will approximate 200,000 barrels, exclusive of its interest in Big Lake oil field.

Superior Oil Corp.

Superior Oil Corp. and subsidiary company report net profit of $63,438, after all charges, equal to 6 cents a share (par $1) on 988,979 shares of capital stock in the first three months of 1936. This compares with net profit of $81,561 before provision for federal income tax in the first quarter of 1935.

T. P. Coal & Oil

Texas Pacific Coal and Oil Co. and subsidiaries statement of income for the three months ended March 31, 1936, shows net profit of $138,499 after all charges except for provision for federal income tax. This compares with net loss of $55,806 in the first three months of 1935.

Standard of California

First quarter earnings of the Standard Oil Co. of California reflected the unsettled markets which prevailed on the west coast during that period.

Consolidated net profit of the company the first three months of 1936 was $2,952,957, after all charges, equal to 23 cents a share on the common stock outstanding. This compares with net profit of $4,891,021 or 37 cents a share in the same period of 1935.

Amerada Corp.

Report of Amerada Corp. for the first three months of 1936 shows net income of $473,996, after all charges, equal to 60 cents a share on 788,675 no-par shares of capital stock, excluding shares held by a subsidiary company.

This compares with net income of $399,310 or 51 cents a share in the first quarter of 1935.

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First Quarter Oil Burner Orders Rise 60%

WASHINGTON, May 10.—New orders for oil burners during the first three months of 1936 were about 60 per cent ahead of orders placed during the first quarter of last year and more than double the orders in the same period in 1934, according to a report by the U. S. Census Bureau.

During January, February and March of 1936 a total of 23,649 new orders were received by 152 manufacturers reporting to the Census Bureau. In the same period of 1935, new orders totaled 14,774 while in the first quarter of 1934 the total was 11,915.

New orders in March numbered 9235 as against 5620 in March, 1935. February new orders this year totaled 7139 burners.

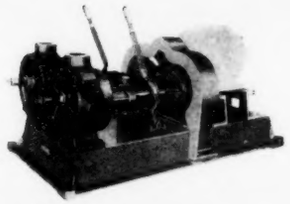
These figures do not include burners used in ranges, stoves, water heaters and the like, which are covered in a separate report on "distillate oil burners." This latter report shows that 21,868 new orders for distillate oil burners were received during the first three months of 1936 as compared with 12,737 received during the same period last year. In March, new orders for distillate burners totaled 7025 as compared with 4025 for March a year ago.

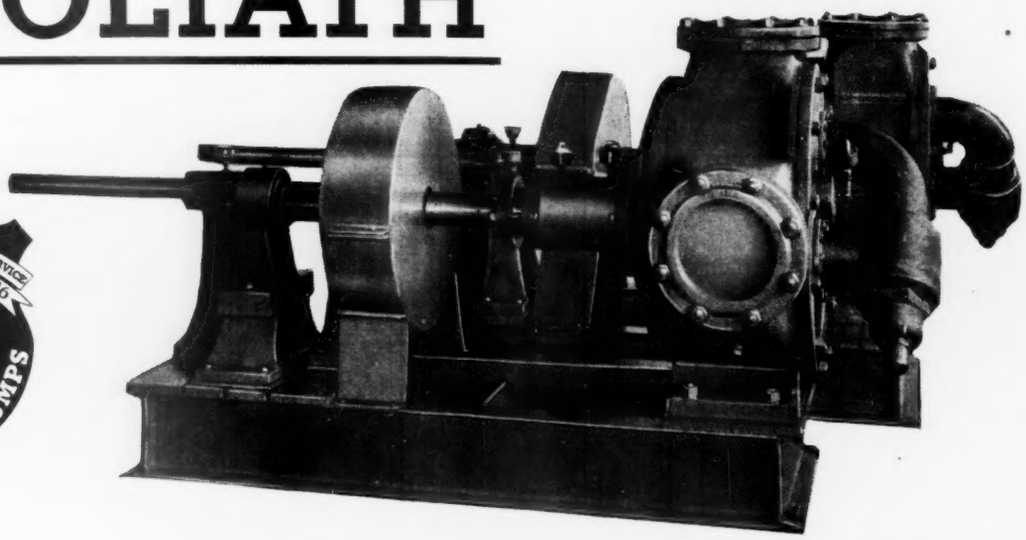
Oil Trades Plan Outing

NEW YORK, May 22.—The Oil Trades Association of New York will hold its fifteenth annual sports outing at the Pelham Country Club, Pelham Manor, New York, on June 16.

The program will include a golf tournament for members and guests, the annual baseball game, luncheon and dinner.

Whether you need a DAVID or a GOLIATH





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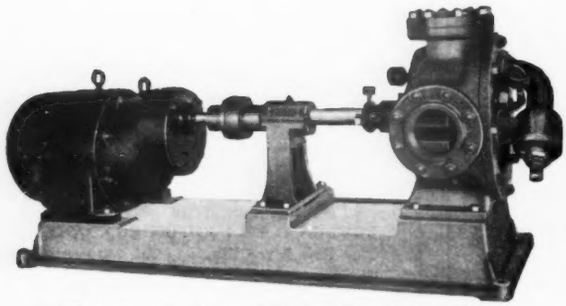
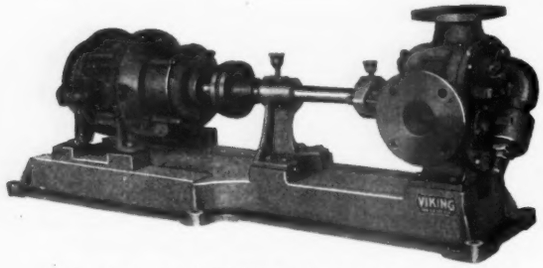


Illustrated above; Viking Straitline Unit—the last word in pumping units. Mounted on narrow compact base—saves space. Viking Relief Valve on Pump Head standard equipment.



The Viking Straitline Pump is available in both single and double gear reductions—permitting the handling of heavy, viscous liquids. Available in capacities of 20 to 450 G.P.M.

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Whether your pumping problem is simple or involved—whether it requires a conventional type pump or a specially designed and constructed job—you will find the Viking organization ever ready to fit their knowledge and experience to the successful solution of your problem. *Write for Special Bulk Plant Bulletin and Prices.*

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